# BOROUGH OF OLDHAM.

# REPORT

ON THE

# HEALTH OF OLDHAM

FOR THE YEAR 1897,

BY


## CHARLES H. TATTERSALL,

*Medical Officer of Health for the Borough and Medical Superintendent of the Westhulme Fever Hospital.*



**Oldham:**

W. E. CLEGG, PRINTER, ETC., 30, MARKET PLACE, AND PETER STREET.

1898.

# MEMBERS OF THE SANITARY COMMITTEE, 1897.

---

Mr. Alderman Waddington, Chairman.

„ „ Hanson, Vice-Chairman.

The Mayor
(Mr. Alderman Whittaker).

| | |
|---|---|
| Mr. Alderman Brierley | Mr. Councillor Hawkins |
| „ Councillor Chadwick | „ „ Horrobin |
| „ „ Emmott | „ „ Simister |
| „ „ Gartside | „ „ J. Taylor |

Mr. Councillor F. Wild.

TO THE

# CHAIRMAN AND MEMBERS

OF THE

# SANITARY COMMITTEE.

GENTLEMEN,

I have the honour to submit to you my Fourth Annual Report on the Health of Oldham, giving an account of the Vital Statistics of the Borough, particulars as to the cases of Infectious Disease, and a summary of the Administrative Work carried out in the Health Department during the year 1897.

There are no very special features of interest with regard to the Mortality of the Borough and there have been no serious epidemics of Infectious Disease.

It is a matter for great regret that the ratepayers of the town threw out the proposed Bill to enable the Corporation to convert the method of Excremental Removal to the Water-Carriage System, and I sincerely hope, in the interests of the Borough, that this matter will not be allowed to remain in its present unsatisfactory condition.

The question of Sewage Purification has occupied my attention closely during the year, and I am glad to see that the method of purification adopted by the Sewage Committee, by passing the Tank effluent through bacterial filter beds made of cinders, gives every promise of proving successful.

With regard to this matter, as my connection with the town has now ceased, I hope it will not be considered presumptuous for me to warn the Corporation, that successful results can only be maintained by providing a sufficient area for filtration purposes, namely, not less than five acres for the present requirements, and also by constantly watching the work done by each filter.

As an Appendix to this Report, I have prepared a Life Table for Oldham, based on the mortality of the ten years 1881-1890.

This has involved a great amount of labour, and owing to the small amount of time at my disposal, has kept me occupied for the last two years.

I should have found it impossible to have completed it at all but for the invaluable advice and assistance in the more complicated mathematical portions of the work which I have received from Mr. William Worthington, F.I.A., of Manchester.

I feel sure that a careful perusal will repay anyone interested in the health of Oldham, showing as it does how very far the conditions of life in the Borough are from being satisfactory

It is with a feeling of regret—the pleasant conditions under which I have worked in Oldham being now at an end—that I now beg to thank you for the kindly consideration I have always received at your hands, and the great assistance you have always given me in carrying out my duties.

I wish especially to thank His Worship the Mayor, Mr. Alderman Waddington, for the considerate and kind assistance which I have constantly received from him during the three years he has acted as Chairman of the Sanitary Committee.

I feel that I ought not to allow this occasion to pass without expressing my indebtedness to Mr. Chambers and the clerical staff for the hearty assistance which I have always received from them, as well as from the Inspectors.

I have also to thank Miss Whitehead most heartily for the very able manner in which she has controlled the Westhulme Hospital, making my work in connection with that institution both very easy and pleasant, when with less able assistance it would have proved both difficult and anxious.

CHAS. H. TATTERSALL.

*Town Hall, Salford,*
*May 18th, 1898.*

# INDEX.


| | PAGE. |
|---|---|
| **Part I.—VITAL STATISTICS** | 9 |
| Population :—Sex and Age | 9-11 |
| Births and Birth Rates | 11 |
| Deaths and Death Rates | 12 |
| District Mortality Rates | 13 |
| Infant Mortality | 14 |
| Zymotic Diseases | 16 |
| Influenza, Phthisis, and Acute Lung Diseases | 17 |
| Inquests ; Comparison of Death Rates | 18 |
| Meteorological Report | 19 |
| Summary of Vital Statistics | 23 |
| Table No. 1—Houses Built in the Borough, 1871 to 1897 | 24 |
| „ 2 and 3—Deaths under 1 year from Various Causes | 25-26 |
| „ 4—Infantile Mortality in 32 Large Towns | 27 |
| „ 5—Birth and Death Rates in 32 Large Towns | 28 |
| „ 6—Population, Birth and Death Rates | 29 |
| „ 7—Deaths Classified in Age Groups | 30 |
| „ 8—Death Rates in the Various Wards | 31 |
| „ 9—Deaths Classified according to Diseases, Ages, and Localities | 32 |
| „ 10—Death Rates from Various Causes, 1877 to 1897 | 34 |
| „ 11— Do. from 7 principal Zymotic Diseases, 1877 to 1897. | 35 |
| „ 12—Meteorological Observations | 36 |
| „ 13—Prices of Various Commodities, 1885 to 1897 | 38 |
| „ 14—Inquests and Verdicts | 39 |
| „ 15—Deaths Classified according to Diseases and Ages | 40 |
| **Part II.—INFECTIOUS DISEASES** | 47 |
| Smallpox | 48 |
| Scarlet Fever | 48 |
| Diphtheria | 49 |
| Typhoid Fever | 50 |
| Typhus Fever and Puerperal Fever | 51 |
| Disinfection | 51 |
| Schools Closed owing to Measles | 52 |
| New Buildings at Westhulme | 52 |

**Part II.—INFECTIOUS DISEASES** *(Continued)*— PAGE.

Table No. 16—Scarlet Fever Cases and Deaths ..... 53
„ 17—Diphtheria do. ..... 54
„ 18—Typhoid Fever do. ..... 55
„ 19—Typhus Fever do. ..... 56
„ 20—Cases of Sickness and Deaths Registered ..... 57
„ 21—New Cases of Sickness Reported ..... 58
„ 22—Cases Admitted into Westhulme Hospital, 1880 to 1897 ..... 60
„ 23—Cases of Sickness Reported, 1881 to 1897 ..... 62
„ 24—Cases Admitted into Smallpox Hospitals, 1894 to 1897 ..... 63

**Part III.—WORK OF THE HEALTH DEPARTMENT** ..... 65
House to House Inspection ..... 65
Insanitary Property Closed in 1897 ..... 66
Dairies and Milkshops ..... 67
Common Lodging Houses and Slaughter Houses ..... 68
Offensive Trades, Bakehouses, Smoke Nuisance ..... 69
The Sale of Food and Drugs ..... 70
Factory and Workshops Act ..... 71
Report of Chief Inspector *re* Meat Supply ..... 71
Table No. 25—House to House Inspection ..... 76
„ 26—Dairies and Milk Shops ..... 77
„ 27—Inspection of Mill Lodges, Slaughter Houses, &c. ..... 78
„ 28—Half-Hourly Smoke Observations ..... 79
„ 29—Smoke Appliances in use in Oldham ..... 80
„ 30—Smoke Prosecutions during 1897 ..... 81
„ 31—Samples of Food, &c., Analysed, 1876 to 1897 ..... 82
„ 32—Workshops Registered and Visited ..... 83
„ 33—Magisterial Proceedings, 1897 ..... 84
Inspectors' Reports ..... 85
Clothing Disinfected ..... 88
Nightsoil and Ashes Departments, 1897 ..... 89

**Appendix.—LIFE TABLE FOR OLDHAM** ..... 91

Digitized by the Internet Archive
in 2018 with funding from
Wellcome Library

https://archive.org/details/b29936809

PART I.

# VITAL STATISTICS.

---

## POPULATION.

The Registrar General's estimate of the population of the Borough of Oldham in the middle of 1897 was 145,845, and this number is the basis on which the various birth and death rates mentioned in this report are calculated.

This estimate is made on the assumption that the Borough continues to grow at the same rate as in the decennium, 1881 to 1891. In my last year's report, I drew attention to the fact, that, judging by the amount of building going on in the town, this estimate is an exaggerated one, inasmuch as the rate of growth of the town has been steadily falling. This opinion is confirmed by Table No. 1, which shows the number of houses built each year from 1871 to 1897; and the figures for the past year, when 360 new houses were erected, does not alter the position, although this is the greatest number since 1888, and there has been a distinct increase in the activity of the building trade during the year.

Basing the population on the number of houses in the Borough, and allowing the same number of persons to each house as existed at the 1891 census, which is a fairly reliable method of ascertaining roughly the number at present living in the town, the actual population in the middle of 1897 would be **139,491,** or 6,354 below the estimate of the Registrar General.

The result of this over estimation is that the recorded death and birth rates mentioned in this report are about 4 per cent. under estimated.

The estimated population has been distributed to the various wards as follows :—

| | | | |
|---|---|---|---|
| St. Mary's | ... | ... | 11,586 |
| St. Peter's | ... | ... | 13,181 |
| Werneth ... | ... | ... | 13,270 |
| Westwood | ... | ... | 12,864 |
| St. Paul's ... | ... | ... | 11,406 |
| Coldhurst... | ... | ... | 11,697 |
| Hartford ... | ... | ... | 13,802 |
| Hollinwood | ... | ... | 8,642 |
| Clarksfield | ... | ... | 13,588 |
| Mumps ... | ... | ... | 9,967 |
| St. James' | ... | ... | 11,500 |
| Waterhead | ... | ... | 14,342 |

The density of the population varies greatly in the different wards, and is shown in detail in Table No. 6. It ranges from 102·5 persons to the acre in St. Mary's Ward to 11·3 persons to the acre in St. James' Ward.

The natural increase of the population during the year—that is, the excess of births over deaths—is **1,007,** as compared with 1,016 in 1896; 781 in 1895; and 1,211 in 1894.

The total natural increase of the population since the census is 6,672, as compared with the Registrar General's estimated increase of 14,382, or the smaller estimated increase mentioned above of 8,018.

## SEX AND AGE.

In Table No. 7 particulars are given of the estimated population of each sex in various groups of ages.

The total population of 145,845 is made up of **69,481 males** and **76,364 females.** There are 16,286 persons living under 5 years of age, 32,560 from 5 to 15 years, 29,443 from 15 to 25 years, 63,308 from 25 to 65 years, and 4,248 over 65 years of age. The number of females exceeds that of males in each age group, but is most marked in the more advanced periods of life.

## BIRTHS.

During the year 1897 there were 3,793 births registered in the borough, which is a decrease of 176 on last year. This gives a **birth rate** of **26·1** per thousand of the estimated population, against 27·2 for 1896, and an average of 27·8 for the preceding five years.

Of the total births 1,925 were males and 1,868 females.

There were 166 births registered as being illegitimate, or 4·4 per cent. of the total number of births. Of these 46 occurred in the first, 36 in the second, 43 in the third, and 41 in the last quarter.

## DEATHS.

The total deaths registered from all causes in the borough during the year 1897 numbered 2,786, made up of 1,476 males and 1,310 females. This gives a **death rate** of **19·2** per thousand living.

This compares favourably with the previous years, notwithstanding epidemics of Diarrhœa and Whooping Cough, the deaths from which numbered 145 and 77 respectively. The deaths from Measles and Scarlet Fever are decidedly less than in 1896.

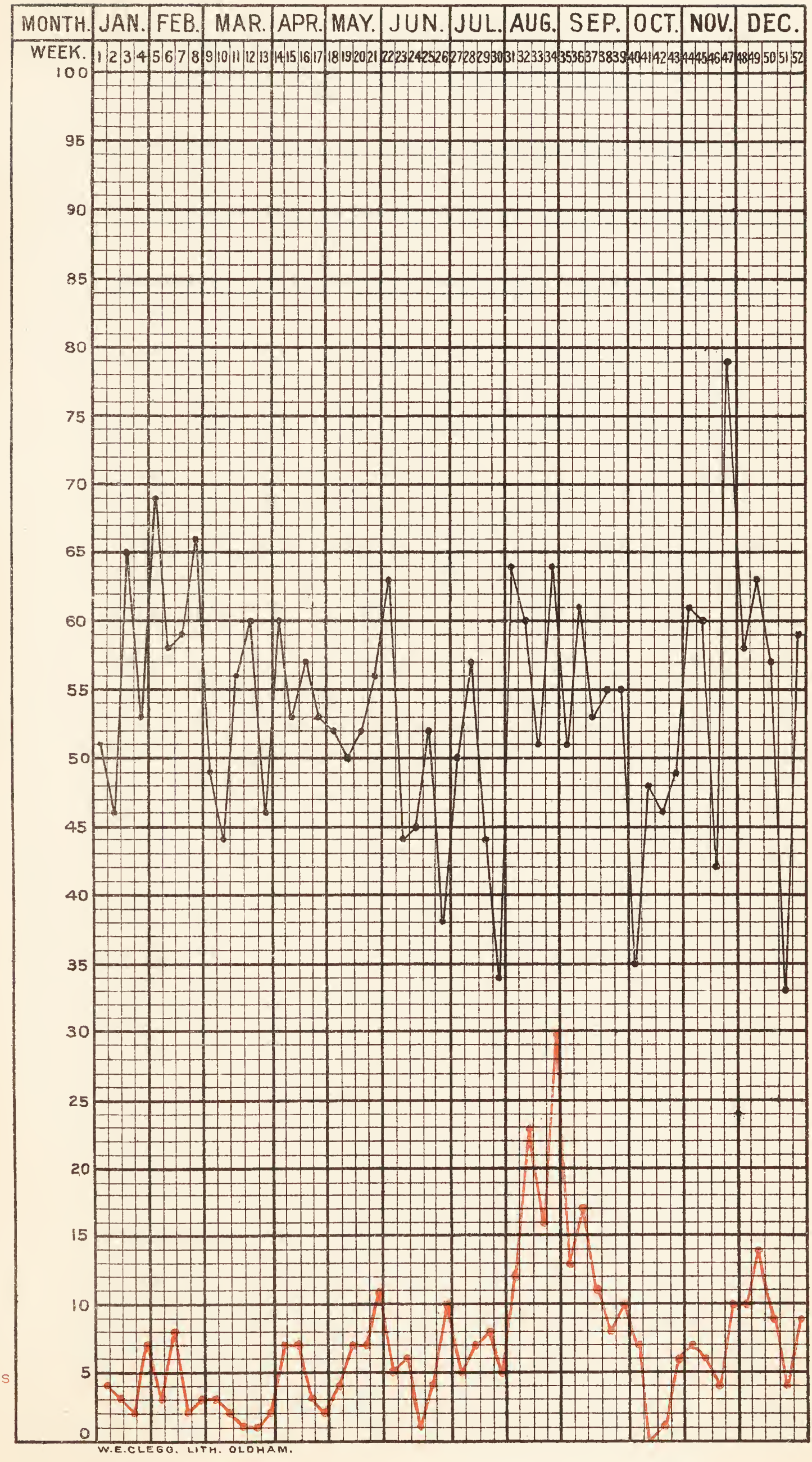
The accompanying chart shows the number of deaths registered weekly from all causes and from Zymotic diseases respectively. The lowest number of deaths occurred in the month of March and the greatest number in August.

## SEX.

In Table No. 7 the deaths and death rates of the two sexes are separated, and it will be noticed that, as usual, the death rate among females is much lower than among males. During 1897 there were 1,476 deaths of males registered, which, on an estimated population of 69,481, gives a death rate for the year of 21·2, whereas there were 1,310 deaths of females registered, giving a death rate of 17·1 on an estimated population of 76,364. This shows a difference in favour of the female of 4 per thousand living.

Again, on taking age into consideration, the advantage to the female is seen at all periods, the rates per thousand living being: Under 5 years of age—males 76·6, females 59·6; from 5 to 15—males 4·6, females 3·6; from 15 to 25—males 5·6, females 3·9; from 25 to 65—males 17·9, females 13·1; 65 years of age and upwards—males 107·8, females 99·3.

# BOROUGH OF OLDHAM.




W.E.CLEGG. LITH. OLDHAM.

## DEATHS AT VARIOUS AGES.

The deaths and death rates per thousand living at each age period are shown in Table No. 7, from which it will be seen that mortality falls most heavily on the groups under 5 years of age (67·8 per thousand living) and over 65 years (102·9 per thousand), and most lightly on the groups 5 to 15 (4·1 per thousand) and 15 to 25 (4·7 per thousand).

Comparing the death rates at the various age periods with those of last year, a decrease is noticeable in the groups under 5 years (67·8, against 75·1) and 25 to 65 years of age (15·3, against 16·7), and an increase in the groups, viz., 5 to 15 years (4·1, against 3·8), 15 to 25 years (4·7, against 4·6), and 65 years and upwards (102·9, against 90·7).

## DISTRICT MORTALITY RATES.

The deaths and death rates in the various wards are set out in detail in Table No. 6 appended to this report. The death rate from all causes varies from 15·4 per thousand in Werneth Ward to 21·4 in Coldhurst Ward, viz. :—

| | | | | |
|---|---|---|---|---|
| Coldhurst Ward... | 21·4 | ... | 90 | persons to an acre. |
| Mumps ,, ... | 21·1 | ... | 80 | ,, |
| Hartford ,, ... | 20·9 | ... | 67 | ,, |
| Waterhead ,, ... | 20·8 | ... | 17 | ,, |
| St. Paul's ,, ... | 20·7 | ... | 25 | ,, |
| St. Mary's ,, ... | 20·5 | ... | 102 | ,, |
| Westwood ,, ... | 19·5 | ... | 46 | ,, |
| St. James' ,, ... | 19·1 | ... | 11 | ,, |
| Clarksfield ,, ... | 17·2 | ... | 22 | ,, |
| Hollinwood ,, ... | 17·0 | ... | 21 | ,, |
| St. Peter's ,, ... | 15·8 | ... | 49 | ,, |
| Werneth ,, ... | 15·4 | ... | 51 | ,, |

For the past five years the lowest and highest rates have been :—

| | | | | |
|---|---|---|---|---|
| 1893 ... | Westwood, | 18·2 | St. Mary's, | 26·4 |
| 1894 ... | Clarksfield, | 15·6 | Coldhurst, | 23·6 |
| 1895 ... | Werneth, | 16·7 | Coldhurst, | 26·6 |
| 1896 ... | Werneth, | 14·1 | St. Mary's, | 25·9 |
| 1897 ... | Werneth, | 15·4 | Coldhurst, | 21·4 |

The highest Zymotic rate (4·2 per thousand) was in St. Paul's Ward, and was due principally to Measles, Whooping Cough, and Diarrhœa. St. James' Ward had the lowest Zymotic rate, which was 1·6 per thousand.

Mumps Ward had the highest rate from Phthisis, viz., 2·4 per thousand, while St. Mary's suffered most from Bronchitis and Pneumonia, the rate being 5 per thousand. St. Paul's again suffered most from Infantile Mortality, there being 233 deaths per thousand births ; Mumps, with 223, and St. James', with 204, coming next.

## INFANT MORTALITY.

The deaths of children under 1 year of age numbered 696, being at the rate of 183 per thousand births. This is the same as last year, and approximates to the 5 years' average, which is 180.

From Table No. 10 a comparison with previous years can be readily made. It is very disappointing to find that notwithstanding the efforts made in various directions to reduce this severe loss of life amongst infants, the average for the five years 1892-1896 is higher than that for any preceding quinquennium.

I append the same tables respecting this matter that have appeared in the two previous reports, viz , the causes of death at each month of age in Table 2, and an analysis of the feeding of the children and the occupation of their mothers in Table 3.

In Table No. 4 the Infantile Mortality Rates for the 32 large towns are given, from which it will be seen that Oldham stands sixteenth in the whole list for the year, the following towns suffering more, viz. :—Preston 263, Burnley 223, Salford 220, Wolverhampton 219, Birmingham 214, Blackburn 208, Nottingham 206, Leicester 205, Liverpool 201, Sheffield 197, Norwich 196, Manchester 193, Leeds 190, Plymouth 188, Bolton 184, and Oldham 183. In the averages for the 10 years, 1886-1895, Oldham stands tenth, viz., Preston 232, Burnley 216, Blackburn 204, Leicester 202, Salford 195, Liverpool 189, Manchester 185, Wolverhampton 183, Bolton 180, Oldham 178. It is interesting to note, and from a Lancashire point of view, sad to find that the whole of the eight Lancashire towns in the 32 great towns are included in the ten whose infants die off at the greatest rate, and this in spite of the fact that the Lancashire working man is probably the best paid and best housed of any in England.

## ILLEGITIMACY AND INFANT MORTALITY.

There were 166 illegitimate births registered during the year, and 57 deaths of illegitimate children under one year of age. This gives a death rate of 343 per thousand births.

This shows that the illegitimate infant has little more than one-half the chance of surviving the first year of life compared with those born in wedlock.

## CLASSIFICATION OF CAUSES OF DEATH.

In Table No. 15 there will be found a detailed classification of the deaths registered during the year 1897, with their various causes at different groups of ages.

These deaths may be summarised as follows :—

| | | | | | |
|---|---|---|---|---|---|
| Zymotic Diseases... | 743 | deaths, or | 26 | per cent. | of the total. |
| Constitutional ,, ... | 162 | ,, | 6 | ,, | ,, |
| Developmental ,, ... | 163 | ,, | 6 | ,, | ,, |
| Local ,, ... | 1434 | ,, | 51 | ,, | ,, |
| Other ,, ... | 219 | ,, | 9 | ,, | ,, |
| Deaths from violence | 65 | ,, | 2 | ,, | ,, |

The proportionate distribution of deaths into these classes is almost identical with that for 1895 and 1896.

## ZYMOTIC DISEASES.

Zymotic diseases of various kinds have been prevalent during the year, and particulars respecting them will be found set out at length in Part II. of this report.

The deaths from the seven principal Zymotic diseases numbered 367 in all, giving a Zymotic death rate of 2·5 per thousand living, against 403 deaths in 1896, giving a rate of 2·8 per thousand.

The deaths from the various diseases were as follows :—

| | |
|---|---|
| Measles ... ... ... | 96 |
| Scarlet Fever ... ... ... | 21 |
| Diphtheria ... ... ... | 9 |
| Whooping Cough ... ... | 77 |
| Fever (Typhus and Typhoid)... | 19 |
| Diarrhœa ... ... ... | 145 |

## INFLUENZA.

There has been no very marked epidemic of this disease during the year, and the deaths from this cause number 31, against 16 last year, 77 in 1895, 29 in 1894, and 44 in 1893.

## PHTHISIS.

There were 232 deaths from this cause, being 8 per cent. of the total deaths, and giving a death rate of 1·6 per thousand of the population.

In 1896 the deaths from Phthisis formed 8 per cent. of the total deaths, and the death rate was 1·6 per thousand of the population. The rate for 1896 was the lowest recorded for the borough, and it is very satisfactory to find improvement in this direction maintained, and this is probably due to the diffusion of the knowledge of its infectious character, and the disinfection of all houses in which deaths have occurred, which is carried out free of cost by the Department.

It is, however, important that there should be no relaxation of the efforts that have been made in the past to bring home to the mass of the population the preventible character of this dread disease.

## ACUTE LUNG DISEASES.

From Bronchitis, Pneumonia, and Pleurisy, 584 deaths were registered, against 666 for 1896, 695 for 1895, 536 for 1894, 624 for 1893, and 683 for 1892. From Bronchitis alone there were 274 deaths, giving a death rate of 1·9 per thousand, against 2·4 for last year; while from Pneumonia 302 deaths were registered, giving a death rate of 2·1 per thousand, against 2·2 for 1896, and 2·7 the corrected average for the years 1887 to 1891.

## INQUESTS.

There have been 166 inquests held during the year, particulars of which will be found in Table No. 14, for which I am indebted to the Coroner.

From this Table it will be seen that there was 1 verdict of murder, 1 of manslaughter, 51 of accidental death, and 83 of death from natural causes, against 1 of manslaughter, 54 of accidental death, and 90 of death from natural causes in 1896.

## COMPARISON OF DEATH RATES, &c., IN OLDHAM WITH OTHER TOWNS.

In Table No. 5 will be found a comparison of the death rates in Oldham with those of the remainder of the 32 large towns.

Of the eight Lancashire towns Oldham stood first, the figures being: Oldham, 19·2; Blackburn, 19·2; Burnley, 20·7; Bolton, 21·1; Manchester, 23·1; Liverpool, 23·5; Salford, 23·9; and Preston, 24·3.

From the principal Zymotic diseases the death rate in the 32 large towns averaged 2·4 per thousand living, against 2·5 in Oldham. The Zymotic rates in the other Lancashire towns were: Blackburn, 2·0; Burnley, 2·0; Manchester, 3·8; Bolton, 4·2; Liverpool, 4·7; Salford, 5·5; and Preston, 5·6.

## METEOROLOGICAL REPORT.

JANUARY.—The mean pressure of the barometer for the month was 30·01 inches, and the mean temperature 33 degrees Farhenheit. The minimum temperature recorded on the grass was 20 degrees, and the maximum in the sun was 46 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 40 to 39 degrees.

Rain and snow fell on 10 days, the total rainfall amounting to 1·33 inches.

FEBRUARY.—The mean barometric pressure was 30·13 inches, and the mean temperature 42 degrees. The minimum temperature recorded on the grass was 28 degrees, and the maximum in the sun 58 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 38 to 40 degrees.

Rain and snow fell on 17 days, the total rainfall for the month amounting 3·51 inches. Easterly winds prevailed.

MARCH.—The mean barometric pressure for the month was 29·71 inches, and the mean temperature 42 degrees. The minimum temperature on the grass was 27 degrees, and the maximum in the sun 61 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 40 to 42 degrees.

Rain fell on 20 days, the total rainfall being 2·78 inches. The weather was rough and unsettled.

APRIL.—The mean barometric pressure was 29·89 inches, and the mean temperature 42 degrees. The minimum temperature on the grass was 27 degrees, and the maximum temperature in the sun was 66 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 42 to 44 degrees.

Rain fell on 19 days out of 35, the total rainfall amounting to 4·44 inches.

MAY.—The mean barometric pressure was 30·11 inches, and the mean temperature 48 degrees. The minimum temperature recorded on the grass was 28 degrees, and the maximum in the sun 75 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 44 to 48 degrees.

Rain fell on 12 days, the total rainfall amounting to 2·06 inches. Unsettled weather. Thunderstorm on the 28th.

JUNE.—The mean barometric pressure was 30·10 inches, and the mean temperature 57 degrees. The minimum temperature recorded on the grass was 38 degrees, and the maximum in the sun 84 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 48 to 53 degrees.

Rain fell on 18 days out of 35, the total rainfall amounting to 5·50 inches.

JULY.—The mean barometric pressure was 30·10 inches, and the mean temperature 60 degrees. The minimum temperature recorded on the grass was 43 degrees, and the maximum in the sun 86 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 53 to 56 degrees.

Rain fell on 11 days, the total rainfall amounting to 1·90 inches.

AUGUST.—The mean barometric pressure was 29·89 inches, and the mean temperature 60 degrees. The minimum temperature recorded on the grass was 42 degrees, and the maximum in the sun 90 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 56 to 57 degrees.

Rain fell on 21 days, the total rainfall amounting to 3·90 inches. Easterly winds. Weather unsettled.

SEPTEMBER.—The mean barometric pressure was 30·04, inches, and the mean temperature 52 degrees. The minimum temperature recorded on the grass was 35 degrees, and the maximum in the sun 72 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 57 to 52 degrees.

Rain fell on 16 days out of 35, and the total rainfall amounted to 6·30 inches.

OCTOBER.—The mean barometric pressure was 30·24 inches, and the mean temperature 49 degrees. The minimum temperature recorded on the grass was 28 degrees, and the maximum in the sun 70 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 52 to 49 degrees.

Rain fell on 9 days, and the total rainfall amounted to 2·19 inches. Easterly winds prevailed.

NOVEMBER.—The mean barometric pressure was 30·34 inches, and the mean temperature 46 degrees. The minimum temperature recorded on the grass was 28 degrees, and the maximum in the sun 67 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 49 to 47 degrees.

Rain fell on 10 days, and the total rainfall amounted to 3·24 inches Easterly winds prevailed.

DECEMBER.—The mean barometric pressure was 29·91 inches, and the mean temperature 40 degrees. The minimum temperature on the grass was 20 degrees, and the maximum in the sun 57 degrees.

The temperature recorded by the thermometer 4 feet below the surface ranged from 47 to 42 degrees.

Rain fell on 23 days out of 35, and the total rainfall amounted to 8·09 inches. Easterly winds prevailed.

# VITAL STATISTICS, 1897.

## SUMMARY.

| | | | | |
|---|---|---|---|---|
| Population estimated by the Registrar General to the middle of the year ... ... ... ... | | | | 145,845 |
| Births registered in the 52 weeks ending January 1st, 1898 ... | Males ... | 1,925 | 3,793 | |
| | Females ... | 1,868 | | |
| Deaths registered in the 52 weeks ending January 1st, 1898 ... | Males ... | 1,476 | 2,786 | |
| | Females ... | 1,310 | | |
| Deaths from the seven principal Zymotic diseases... | | | | 367 |
| Deaths under 1 per 1,000 Births ... ... ... | | | | 183 |
| Annual Rate of Births per 1,000 living population. | | | | 26·1 |
| Annual Rate of Mortality from all causes per 1,000 living population ... ... ... ... | | | | 19·2 |
| Annual Rate of Mortality per 1,000 living population from the seven principal Zymotic diseases. | | | | 2·5 |

Of the 2,786 deaths registered during the year 1897, 1,104, or 39·6 per cent., were those of children under 5 years of age.

### Principal Causes of Deaths.

| | | | |
|---|---|---|---|
| Bronchitis ... ... | 274 | Cancer ... ... ... | 110 |
| Pneumonia ... ... | 302 | Convulsions ... ... | 72 |
| Phthisis ... ... ... | 232 | Old Age ... ... ... | 76 |
| Heart Disease... ... | 199 | Inflammation of Brain | 68 |
| Measles ... ... ... | 96 | Diarrhœa... ... ... | 145 |
| Apoplexy... ... ... | 145 | Premature Birth ... | 75 |
| Debility ... ... ... | 113 | Whooping Cough ... | 77 |

# TABLE No. 1.

## HOUSES BUILT IN THE BOROUGH.

| Year. | No. of Houses Built. |
|---|---|
| March, 1871, to March, 1872 ... ... | 277 |
| ,, 1872 ,, 1873 ... ... | 197 |
| ,, 1873 ,, 1874 ... ... | 588 |
| ,, 1874 ,, 1875 ... ... | 649 |
| ,, 1875 ,, 1876 ... ... | 867 |
| ,, 1876 ,, 1877 ... ... | 1181 |
| ,, 1877 ,, 1878 ... ... | 1010 |
| ,, 1878 ,, 1880 ... ... | 989 |
| ,, 1880 ,, 1881 ... ... | 746 |
| ,, 1881 ,, 1882 .. ... | 738 |
| ,, 1882 ,, 1883 ... ... | 644 |
| ,, 1883 ,, 1884 ... ... | 631 |
| ,, 1884 ,, 1885 ... ... | 737 |
| ,, 1885 ,, 1886 ... ... | 780 |
| ,, 1886 ,, 1887 ... ... | 657 |
| ,, 1887 ,, 1888 ... ... | 711 |
| ,, 1888 ,, 1889 ... ... | 371 |
| ,, 1889 ,, 1890 ... ... | 218 |
| ,, 1890 ,, 1891 ... ... | 214 |
| ,, 1891 ,, 1892 ... ... | 190 |
| ,, 1892 ,, 1893 ... ... | 227 |
| ,, 1893 ,, 1894 ... ... | 362 |
| ,, 1894 ,, 1895 ... ... | 284 |
| ,, 1895 ,, 1896 ... ... | 294 |
| ,, 1896 ,, 1897 ... ... | 360 |

# TABLE No. 2.

## Deaths under 1 Year from Various Causes.

| Ages | Premature Births | Congenital Malformation | Marasmus, Inanition, and Debility | Diarrhœa | Other Zymotics | Convulsions | Dentition | Tubercular Diseases | Pneumonia and Bronchitis | Other Causes | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Under 1 mon. | 68 | 9 | 42 | 7 | 2 | 25 | ... | 1 | 9 | 31 | 194 |
| 1-2 months | 6 | ... | 17 | 8 | 3 | 3 | ... | 4 | 8 | 13 | 62 |
| 2-3 ,, | ... | ... | 14 | 16 | 3 | 6 | ... | 4 | 10 | 14 | 67 |
| 3-4 ,, | 2 | 2 | 7 | 14 | 2 | 7 | ... | 2 | 13 | 6 | 55 |
| 4-5 ,, | ... | .. | 5 | 9 | 6 | 4 | ... | 4 | 12 | 7 | 47 |
| 5-6 ,, | ... | ... | 4 | 9 | 3 | 2 | 1 | 2 | 13 | 5 | 39 |
| 6-7 ,, | ... | ... | 4 | 10 | 7 | 1 | 1 | 3 | 14 | 4 | 44 |
| 7-8 ,, | ... | ... | 2 | 9 | 6 | 1 | 3 | ... | 19 | 3 | 43 |
| 8-9 ,, | ... | . | 6 | 6 | 6 | 2 | 2 | 4 | 12 | 1 | 39 |
| 9-10 ,, | ... | ... | 3 | 2 | 4 | 1 | 1 | 1 | 15 | 3 | 30 |
| 10-11 ,, | ... | ... | ... | 5 | 7 | 1 | ... | 6 | 10 | 3 | 32 |
| 11-12 ,, | ... | ... | 2 | 5 | 13 | 1 | 4 | 4 | 9 | 6 | 44 |
| Totals .. ... | 76 | 11 | 106 | 100 | 62 | 54 | 12 | 35 | 144 | 96 | 696 |

# TABLE No. 3.

## Deaths under One Year of Age.

| Nature of Diseases. | How Fed. | | | | | Cotton Workers. | Charwoman or Domestic Servant. | Other Occupation. | No. where child was nursed at home by mother. |
|---|---|---|---|---|---|---|---|---|---|
| | Breast. | Bottle. | Artificial food. | Both Breast and Bottle. | No Food. | | | | |
| Zymotic Diseases ... | 38 | 19 | 2 | 3 | ... | 6 | ... | 2 | 54 |
| Diarrhœa ..... ... ..... | 32 | 49 | 1 | 18 | ... | 18 | 4 | 3 | 75 |
| Convulsions and Dentition ..... . ... | 34 | 15 | 2 | 8 | 7 | 10 | 4 | 3 | 49 |
| Congenital Malformation ..... | 4 | 2 | ... | 1 | 4 | 2 | 1 | .. | 8 |
| Inanition, Debility, or Marasmus ... | 39 | 36 | 4 | 14 | 13 | 19 | 4 | 4 | 79 |
| Premature Birth ... . | 36 | 8 | 5 | 1 | 26 | 18 | 1 | 7 | 50 |
| Tubercular Diseases | 16 | 9 | 1 | 8 | 1 | 6 | 3 | 3 | 23 |
| Bronchitis and Pneumonia ..... .. | 72 | 47 | 6 | 19 | ... | 17 | 3 | 5 | 119 |
| All other Diseases ... | 46 | 28 | ... | 11 | 11 | 21 | 2 | 6 | 67 |
| Totals ..... | 317 | 213 | 21 | 83 | 62 | 117 | 22 | 33 | 524 |

# TABLE No. 4.

## INFANTILE MORTALITY IN THE 32 LARGE TOWNS PER 1000 BIRTHS.

| | 1897. | 1896. | Ten Years, 1886-1895. |
|---|---|---|---|
| West Ham ... ... ... | 171 | 165 | 153 |
| Croydon ... ... ... | 139 | 150 | 122 |
| Brighton ... ... ... | 142 | 135 | 151 |
| Portsmouth ... ... | 168 | 154 | 149 |
| Plymouth ... ... ... | 188 | 178 | 167 |
| Bristol ... ... ... | 146 | 142 | 145 |
| Cardiff ... ... ... | 150 | 165 | 162 |
| Swansea ... ... ... | 139 | 161 | 160 |
| Wolverhampton ... ... | 219 | 184 | 183 |
| Birmingham ... ... | 214 | 197 | 174 |
| Norwich ... ... ... | 196 | 164 | 176 |
| Leicester ... ... ... | 205 | 187 | 202 |
| Nottingham ... ... | 206 | 168 | 171 |
| Derby ... ... ... | 168 | 151 | 150 |
| Birkenhead . .. | 164 | 177 | 163 |
| Liverpool ... ... ... | 201 | 173 | 189 |
| Bolton ... ... ... | 184 | 168 | 180 |
| Manchester... ... . | 193 | 176 | 185 |
| Salford ... ... ... | 220 | 199 | 195 |
| **OLDHAM** ... ... ... | **183** | **183** | **178** |
| Burnley ... ... ... | 223 | 170 | 216 |
| Blackburn ... ... ... | 208 | 171 | 204 |
| Preston ... ... ... | 263 | 203 | 232 |
| Huddersfield ... ... | 132 | 166 | 164 |
| Halifax ... ... ... | 140 | 149 | 162 |
| Bradford ... ... ... | 179 | 143 | 173 |
| Leeds ... ... ... | 190 | 169 | 177 |
| Sheffield ... ... ... | 197 | 173 | 178 |
| Hull... ... .. ... | 179 | 173 | 170 |
| Sunderland ... ... | 168 | 158 | 167 |
| Gateshead ... ... ... | 173 | 172 | 164 |
| Newcastle ... ... ... | 177 | 165 | 165 |

# TABLE No. 5.

## SHOWING BIRTH AND DEATH RATES in 32 Large Towns during the year 1897.

| CITIES AND BOROUGHS. | Estimated Population. | Birth Rates. | Death Rates. | Zymotic Death Rates. |
|---|---|---|---|---|
| West Ham ... ... ... .. | 273,682 | 32·1 | 15·7 | 2·6 |
| Croydon ... ... ... .. | 121,170 | 25·0 | 13·4 | 1·6 |
| Brighton ... ... ... | 121,401 | 27·1 | 15·1 | 1·6 |
| Portsmouth ... ... ... ... | 182,585 | 26 9 | 16·2 | 2·5 |
| Plymouth ... ... ... ... | 97,658 | 28·3 | 19·1 | 2·2 |
| Bristol ... ... ... ... ... | 232,242 | 28·0 | 17·2 | 1·8 |
| Cardiff ... ... .. ... ... | 170,063 | 31·0 | 14·9 | 2·1 |
| Swansea ... ... ... | 98,250 | 29·9 | 16·0 | 1·3 |
| Wolverhampton ... ... ... | 87,287 | 35·1 | 21·8 | 4·6 |
| Birmingham... ... ... ... | 505,772 | 33·2 | 21·1 | 3·8 |
| Norwich ... ... .. ... | 110,154 | 30·5 | 18·8 | 2·2 |
| Leicester ... ... ... ... | 203,599 | 30 6 | 17·6 | 3·1 |
| Nottingham... ... ... ... | 232,935 | 28·9 | 18·8 | 2·8 |
| Derby ... ... ... ... ... | 103,291 | 27·2 | 16·0 | 1·6 |
| Birkenhead ... . ... ... | 111,001 | 31·7 | 18·4 | 2·6 |
| Liverpool .. ... .. ... | 644,129 | 34·6 | 23·5 | 4·7 |
| Bolton ... ... ... ... ... | 121,433 | 32·8 | 21·1 | 4·2 |
| Manchester ... ... ... ... | 534,299 | 33·2 | 23·1 | 3·8 |
| Salford ... .. . ... ... | 213,190 | 35·1 | 23·9 | 5·5 |
| **OLDHAM** ... ... ... ... | **145,845** | **26·1** | **19·2** | **2·5** |
| Burnley... ... .. ... .. | 100,000 | 31·5 | 20·7 | 2·0 |
| Blackburn ... ... ... ... | 131,330 | 27·5 | 19·2 | 2·0 |
| Preston... ... ... ... ... | 115,103 | 31·8 | 24·3 | 5·6 |
| Huddersfield ... ... . | 101,454 | 23·4 | 16·5 | 1·5 |
| Halifax ... ... ... .. | 95,747 | 22·2 | 16·4 | 1·4 |
| Bradford ... ... ... ... | 231,260 | 24·5 | 17·4 | 2·2 |
| Leeds ... ... .. ... ... | 409,472 | 31·6 | 19·9 | 2·8 |
| Sheffield ... ... ... ... | 351,848 | 34·4 | 21·2 | 3·5 |
| Hull ... ... ... ... ... | 225,045 | 33·3 | 18·6 | 3·3 |
| Sunderland .. ... ... ... | 142,107 | 34·5 | 19·5 | 2·6 |
| Gateshead ... ... ... ... | 101,070 | 35·8 | 18·6 | 2·2 |
| Newcastle ... ... ... ... | 217,555 | 31·2 | 18·7 | 1·6 |

TABLE No. 6.—Showing Population, Births and Birth Rates, Deaths and Death Rates.—1897.

| WARD. | Population. | Area in Acres. | Density (Persons to an Acre). | BIRTHS. | | | Birth Rate per 1,000 Population. | DEATHS. | | | Death Rate per 1,000 Population. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Males. | Females. | Total. | | Males. | Females. | Total. | |
| St. Mary's ..... | 11,586 | 113 | 102·5 | 180 | 167 | 347 | 29·9 | 137 | 101 | 238 | 20·5 |
| St. Peter's ..... | 13,181 | 271 | 48·6 | 155 | 135 | 290 | 22·0 | 98 | 111 | 209 | 15·8 |
| Werneth ..... | 13,270 | 262 | 50·6 | 163 | 158 | 321 | 24·2 | 98 | 107 | 205 | 15·4 |
| Westwood ..... | 12,864 | 280 | 45·9 | 180 | 166 | 346 | 26·9 | 141 | 110 | 251 | 19·5 |
| St. Paul's ..... | 11,406 | 457 | 25·0 | 152 | 153 | 305 | 26·7 | 127 | 109 | 236 | 20·7 |
| Coldhurst ... ..... | 11,697 | 130 | 90·0 | 152 | 158 | 310 | 26·5 | 144 | 106 | 250 | 21·4 |
| Hartford ..... ..... | 13,802 | 207 | 66·7 | 157 | 166 | 323 | 23·4 | 153 | 135 | 288 | 20·9 |
| Hollinwood..... | 8,642 | 420 | 20·6 | 149 | 159 | 308 | 35·6 | 79 | 68 | 147 | 17·0 |
| Clarksfield ..... ..... | 13,588 | 623 | 21·8 | 188 | 182 | 370 | 27·2 | 128 | 106 | 234 | 17·2 |
| Mumps ..... ..... | 9,967 | 125 | 79·7 | 129 | 118 | 247 | 24·8 | 114 | 96 | 210 | 21·1 |
| St. James' ..... | 11,500 | 1,015 | 11·3 | 127 | 128 | 255 | 22·2 | 114 | 106 | 220 | 19·1 |
| Waterhead ..... | 14,342 | 826 | 17·4 | 193 | 178 | 371 | 25·9 | 143 | 155 | 298 | 20·8 |
| Total..... | 145,845 | 4,729 | 30·8 | 1,925 | 1,868 | 3,793 | 26·1 | 1,476 | 1,310 | 2,786 | 19·2 |

# TABLE No. 7.

Estimated Population, also Deaths at all Ages, and at 5 Groups of Ages

| Groups of Ages. | Population. | | Deaths, 1897. | Death rates per 1000 living Population, 1897. |
|---|---|---|---|---|
| | Census, 1891 | Estimated, 1897. | | |
| All Ages ... ... | 131,463 | 145,845 | 2,786 | 19·2 |
| Under 5 Years ... | 15,466 | 16,286 | 1,104 | 67·8 |
| 5 to 15 ,, ... | 29,281 | 32,560 | 133 | 4·1 |
| 15 to 25 ,, ... | 26,406 | 29,443 | 139 | 4·7 |
| 25 to 65 ,, ... | 56,598 | 63,308 | 973 | 15·3 |
| 65 Years and upwards. | 3,712 | 4,248 | 437 | 102·9 |
| | MALES | | | |
| All Ages ... ... | 62,862 | 69,481 | 1,476 | 21·2 |
| Under 5 Years ... | 7,507 | 7,804 | 598 | 76·6 |
| 5 to 15 ,, ... | 14,349 | 15,948 | 73 | 4·6 |
| 15 to 25 ,, ... | 12,551 | 14,025 | 78 | 5·6 |
| 25 to 65 ,, ... | 26,890 | 29,933 | 536 | 17·9 |
| 65 years and upwards.. | 1,565 | 1,771 | 191 | 107·8 |
| | FEMALES | | | |
| All Ages ... ... | 68,601 | 76,364 | 1,310 | 17·1 |
| Under 5 Years ... | 7,959 | 8,482 | 506 | 59·6 |
| 5 to 15 ,, ... | 14,932 | 16,612 | 60 | 3·6 |
| 15 to 25 ,, ... | 13,855 | 15,418 | 61 | 3·9 |
| 25 to 65 ,, ... | 29,708 | 33,375 | 437 | 13·1 |
| 65 Years and upwards. | 2,147 | 2,477 | 246 | 99·3 |

# TABLE No. 8.

Death Rates per 1,000 population in the various Wards, from various Diseases.

1897.

| Ward. | All causes | Seven Principal Zymotic Diseases | Phthisis | Bronchitis | Pneumonia | Deaths under 1 year to 1000 births |
|---|---|---|---|---|---|---|
| St. Mary's | 20·5 | 3·1 | 2·0 | 2·4 | 2·6 | 138 |
| St. Peter's | 15·8 | 1·7 | 1·1 | 1·4 | 1·7 | 196 |
| Werneth | 15·4 | 2·0 | 1·1 | 1·9 | 1·4 | 149 |
| Westwood | 19·5 | 3·7 | 1·7 | 2·0 | 1·5 | 202 |
| St. Paul's | 20·7 | 4·2 | 1·3 | 2·0 | 1·7 | 233 |
| Coldhurst | 21·4 | 2·6 | 1·9 | 2·3 | 1·6 | 190 |
| Hartford | 20·9 | 2·9 | 1·8 | 1·4 | 3·0 | 189 |
| Hollinwood | 17·0 | 2·1 | 0·6 | 2·1 | 1·6 | 146 |
| Clarksfield | 17·2 | 1·9 | 1·2 | 1·6 | 2·3 | 159 |
| Mumps | 21·1 | 2·4 | 2·4 | 1·9 | 2·0 | 223 |
| St. James's | 19·1 | 1·6 | 1·8 | 2·3 | 2·2 | 204 |
| Waterhead | 20·8 | 1·9 | 2·0 | 1·6 | 2·9 | 191 |

# TABLE

Table of Deaths during the year 1897, in the Urban Sanitary District

| Names of Localities. | Mortality from all Causes at subjoined Ages: At all Ages. | Under 1 year. | 1 and under 5. | 5 and under 15. | 15 and under 25. | 25 and under 65. | 65 and upwards. | | Mortality: Scarlatina. | Mortality: Diphtheria. |
|---|---|---|---|---|---|---|---|---|---|---|
| St. Mary's ..... | 238 | 48 | 41 | 10 | 16 | 96 | 27 | Under 5 | 3 | .. |
| | | | | | | | | 5 upwards. | 2 | ... |
| St. Peter's ..... | 209 | 57 | 33 | 8 | 12 | 62 | 37 | Under 5 | ... | 1 |
| | | | | | | | | 5 upwards. | 2 | ... |
| Werneth..... | 205 | 48 | 22 | 12 | 6 | 72 | 45 | Under 5 | ... | ... |
| | | | | | | | | 5 upwards | 2 | ... |
| Westwood ..... | 251 | 70 | 44 | 12 | 16 | 81 | 28 | Under 5 | 4 | 1 |
| | | | | | | | | 5 upwards. | 2 | ... |
| St. Paul's ..... | 236 | 71 | 54 | 13 | 4 | 65 | 29 | Under 5 | 1 | ... |
| | | | | | | | | 5 upwards. | ... | ... |
| Coldhurst ..... | 250 | 59 | 36 | 7 | 11 | 92 | 45 | Under 5 | 1 | 1 |
| | | | | | | | | 5 upwards | ... | ... |
| Hartford ..... | 288 | 61 | 48 | 19 | 19 | 97 | 44 | Under 5 | 3 | 1 |
| | | | | | | | | 5 upwards. | ... | ... |
| Hollinwood ..... | 147 | 45 | 23 | 10 | 5 | 48 | 16 | Under 5 | ... | ... |
| | | | | | | | | 5 upwards. | 1 | ... |
| Clarksfield ..... | 234 | 59 | 26 | 13 | 8 | 91 | 37 | Under 5 | ... | 1 |
| | | | | | | | | 5 upwards. | ... | ... |
| Mumps ..... | 210 | 55 | 19 | 11 | 8 | 85 | 32 | Under 5 | . | 1 |
| | | | | | | | | 5 upwards | ... | ... |
| St. James' ..... | 220 | 52 | 27 | 5 | 16 | 81 | 39 | Under 5 | ... | ... |
| | | | | | | | | 5 upwards. | ... | 1 |
| Waterhead ..... | 298 | 71 | 35 | 13 | 18 | 103 | 58 | Under 5 | ... | 2 |
| | | | | | | | | 5 upwards | ... | ... |
| Totals ..... | 2,786 | 696 | 408 | 133 | 139 | 973 | 437 | Under 5 | 12 | 8 |
| | | | | | | | | 5 upwards. | 9 | 1 |
| *Workhouse ..... | 249 | 11 | 10 | 2 | 6 | 151 | 69 | Under 5 | ... | ... |
| | | | | | | | | 5 upwards. | ... | ... |
| *Infirmary ..... | 45 | ... | 1 | 6 | 9 | 25 | 4 | Under 5 | ... | ... |
| | | | | | | | | 5 upwards. | ... | ... |
| *Westhulme Hospital | 17 | ... | 8 | 4 | 5 | ... | ... | Under 5 | 5 | ... |
| | | | | | | | | 5 upwards | 2 | ... |

* The deaths occurring in the Institutions are

The subjoined numbers have been taken into

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Deaths occurring outside the district among persons belonging thereto. | ... | ... | ... | ... | .. | ... | ... | Under 5 | | ... |
| | | | | | | | | 5 upwards. | ... | ... |
| Deaths occurring within the district among persons not belonging thereto. | 77 | 1 | 3 | 1 | 5 | 37 | 30 | Under 5 | ... | ... |
| | | | | | | | | 5 upwards | ... | . |

Area and Population of the District

Area in Acres: 4,729. Population (Census, 1891): 131,463.

No. 9.

of Oldham, classified according to Diseases, Ages, and Localities.

from subjoined Causes, distinguishing Deaths of Children under Five Years of Age.

| Membranous Croup. | Fevers. | | | Erysipelas. | Measles. | Whooping Cough. | Diarrhœa and Dysentery. | Rheumatic Fever. | Phthisis. | Bronchitis, Pneumonia, and Pleurisy. | Heart Disease. | Influenza. | Injuries. | All other Diseases. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Typhus. | Enteric or Typhoid. | Puerperal. | | | | | | | | | | | | |
| 2 | ... | ... | ... | ... | 2 | 6 | 19 | ... | ... | 22 | ... | ... | 1 | 34 | 89 |
| ... | ... | 3 | ... | ... | ... | ... | 1 | 1 | 23 | 36 | 13 | 3 | 6 | 61 | 149 |
| 3 | ... | ... | .. | ... | 6 | 4 | 9 | ... | .. | 14 | ... | ... | 2 | 51 | 90 |
| ... | ... | 1 | ... | ... | ... | ... | ... | 2 | 14 | 27 | 16 | 4 | 2 | 51 | 119 |
| ... | ... | ... | ... | ... | 8 | 5 | 7 | ... | ... | 12 | ... | ... | ... | 38 | 70 |
| ... | 1 | 1 | ... | 1 | ... | ... | 2 | ... | 15 | 32 | 19 | 3 | 2 | 57 | 135 |
| 3 | ... | ... | ... | ... | 14 | 7 | 13 | ... | 1 | 28 | ... | ... | 3 | 40 | 114 |
| ... | ... | 1 | ... | ... | 3 | ... | 3 | 2 | 21 | 18 | 13 | 4 | 1 | 69 | 137 |
| 1 | ... | 1 | ... | ... | 18 | 11 | 11 | ... | ... | 28 | ... | ... | 2 | 52 | 125 |
| ... | ... | 1 | 2 | ... | 2 | 1 | 2 | ... | 15 | 14 | 15 | 1 | 5 | 53 | 111 |
| 2 | ... | ... | ... | . . | 9 | 7 | 9 | ... | ... | 21 | ... | 1 | 1 | 43 | 95 |
| ... | ... | 1 | ... | ... | 1 | . | 2 | ... | 22 | 28 | 22 | 2 | 3 | 74 | 155 |
| 1 | ... | ... | ... | 1 | 7 | 9 | 14 | ... | 1 | 26 | ... | ... | ... | 46 | 109 |
| 1 | 1 | ... | ... | 2 | 2 | 1 | 2 | 5 | 24 | 35 | 20 | 2 | 2 | 82 | 179 |
| ... | ... | ... | . . | 2 | 5 | 3 | 7 | ... | ... | 17 | ... | ... | 2 | 32 | 68 |
| 1 | ... | 1 | 1 | ... | ... | ... | 1 | ... | 5 | 15 | 13 | 1 | 1 | 39 | 79 |
| 1 | ... | ... | ... | ... | 4 | 8 | 7 | ... | 2 | 24 | ... | ... | 2 | 36 | 85 |
| 1 | ... | 3 | ... | ... | 1 | 1 | 1 | 1 | 15 | 32 | 15 | 3 | 2 | 74 | 149 |
| 1 | ... | ... | ... | ... | 1 | 3 | 17 | ... | 1 | 11 | ... | ... | 2 | 37 | 74 |
| ... | ... | 1 | ... | 2 | 1 | ... | ... | 1 | 23 | 28 | 10 | 4 | 3 | 63 | 136 |
| ... | ... | ... | ... | ... | 4 | 3 | 9 | ... | . | 19 | ... | ... | 1 | 43 | 79 |
| ... | ... | 2 | 1 | ... | ... | ... | ... | ... | 21 | 32 | 21 | ... | 1 | 62 | 141 |
| 3 | ... | ... | ... | ... | 8 | 8 | 8 | ... | 1 | 23 | ... | ... | ... | 53 | 106 |
| ... | ... | 1 | 1 | 1 | ... | ... | 1 | 2 | 28 | 42 | 22 | 3 | 3 | 88 | 192 |
| 17 | | 1 | ... | 3 | 86 | 74 | 130 | ... | 6 | 245 | .. | 1 | 16 | 505 | 1104 |
| 3 | 2 | 16 | 5 | 6 | 10 | 3 | 15 | 14 | 226 | 339 | 199 | 30 | 31 | 773 | 1682 |
| ... | ... | ... | ... | ... | 2 | 3 | 1 | ... | 1 | 1 | ... | ... | ... | 13 | 21 |
| ... | ... | 1 | ... | 1 | ... | ... | 1 | ... | 40 | 21 | 32 | ... | 5 | 127 | 228 |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | 1 | ... | 1 |
| ... | ... | ... | ... | ... | ... | ... | ... | 1 | 2 | 1 | 4 | ... | 16 | 20 | 44 |
| ... | ... | ... | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8 |
| ... | ... | 5 | ... | .. | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 9 |

distributed over the Wards from which they came.

account in judging of the above records of mortality.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | . . | ... | ... | ... | ... |
| ... | ... | ... | ... | . | ... | ... | ... | ... | ... | . . | ... | ... | ... | ... | ... |
| 1 | ... | . . | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | | 2 | 4 |
| ... | ... | 1 | ... | ... | ... | ... | ... | ... | 4 | 7 | 7 | . | 4 | 50 | 73 |

or Division to which this Return relates.

Death Rates: General, 19·2 per 1,000 population; Infant, 183 per 1,000 births.

# TABLE No. 10.

Showing the Birth-rates, also Rates of Mortality from all causes, from the seven principal Zymotic Diseases, and from Phthisis, Bronchitis, and Pneumonia, during the years 1877-1897.

| Years. | Population | RATES PER 1,000 POPULATION FROM | | | | | | Deaths under 1 year to 1000 births |
|---|---|---|---|---|---|---|---|---|
| | | Births | Deaths all causes | 7 princip'l Zymotic Diseases | Phthisis | Bronchitis | Pneumonia | |
| 1877 | 99,557 | 40·2 | 24·9 | 3·0 | 2·2 | 3·3 | 1·6 | 162 |
| 1878 | 102,573 | 39·8 | 26·9 | 5·7 | 2·3 | 3·5 | 1·5 | 175 |
| 1879 | 105,679 | 36·2 | 22·7 | 2·8 | 2·1 | 3·4 | 1·8 | 157 |
| 1880 | 108,880 | 35·4 | 24·6 | 4·3 | 2·3 | 3·3 | 1·7 | 181 |
| 1881 | 112,176 | 35·3 | 22·7 | 2·3 | 2·3 | 3·4 | 2·0 | 152 |
| **Average 5 y'rs** | | **37·4** | **24·3** | **3·6** | **2·2** | **3·4** | **1·7** | **165** |
| 1882 | 114,017 | 35·3 | 24·9 | 2·8 | 2·3 | 3·4 | 2·1 | 182 |
| 1883 | 115,888 | 36·0 | 22·5 | 1·5 | 2·3 | 2·9 | 1·8 | 159 |
| 1884 | 117,791 | 37·4 | 25·9 | 3·7 | 2·6 | 2·8 | 2·3 | 182 |
| 1885 | 119,724 | 37·5 | 23·2 | 2·1 | 2·4 | 2·7 | 2·2 | 167 |
| 1886 | 121,690 | 34·7 | 24·2 | 3·0 | 2·3 | 3·1 | 1·9 | 175 |
| **Average 5 y'rs** | | **36·2** | **24·1** | **2·6** | **2·4** | **3·0** | **2·0** | **173** |
| 1887 | 123,687 | 33·8 | 25·8 | 4·5 | 2·0 | 3·2 | 2·1 | 187 |
| 1888 | 125,717 | 33·3 | 22·3 | 2·2 | 1·9 | 2·6 | 2·6 | 151 |
| 1889 | 127,781 | 31·5 | 22·7 | 3·3 | 1·9 | 2·8 | 2·6 | 178 |
| 1890 | 129,877 | 31·0 | 24·4 | 2·5 | 2·0 | 3·4 | 3·1 | 180 |
| 1891 | 132,010 | 30·8 | 25·6 | 2·3 | 1·9 | 3·7 | 3·3 | 193 |
| **Average 5 y'rs** | | **32·1** | **24·2** | **2·9** | **1·9** | **3·1** | **2·7** | **178** |
| 1892 | 134,221 | 28·9 | 21·9 | 2·6 | 2·1 | 2·7 | 2·3 | 177 |
| 1893 | 136,469 | 28·5 | 20·96 | 2·5 | 1·9 | 2·2 | 2·3 | 186 |
| 1894 | 138,755 | 27·1 | 18·5 | 1·8 | 1·9 | 2·0 | 1·8 | 162 |
| 1895 | 141,079 | 27·4 | 21·9 | 2·7 | 1·7 | 2·6 | 2·3 | 190 |
| 1896 | 143,442 | 27·2 | 20·3 | 2·8 | 1·6 | 2·36 | 2·2 | 183 |
| **Average 5 y'rs** | | **27·8** | **20·7** | **2·5** | **1·8** | **2·4** | **2·2** | **180** |
| 1897 | 145,845 | 26·1 | 19·2 | 2·5 | 1·6 | 1·9 | 2·1 | 183 |

# TABLE No. 11.

Showing the number of deaths from the Seven Principal Zymotic Diseases in the Borough of Oldham, during the years 1877-1897.

| Year | Population | Smallpox | Measles | Scarlet Fever | Diphtheria | Whooping Cough | Fever Typhus and Typhoid | Diarrhœa | Total Deaths |
|---|---|---|---|---|---|---|---|---|---|
| 1877 | 99,557 | 19 | 11 | 58 | 11 | 111 | 28 | 58 | 296 |
| 1878 | 102,573 | 1 | 114 | 240 | 26 | 77 | 36 | 93 | 587 |
| 1879 | 105,679 | ... | 9 | 136 | 19 | 60 | 25 | 46 | 295 |
| 1880 | 108,880 | ... | 96 | 131 | 9 | 70 | 28 | 142 | 476 |
| 1881 | 112,176 | 9 | 7 | 87 | 10 | 36 | 39 | 69 | 257 |
| 1882 | 114,017 | 4 | 69 | 58 | 10 | 77 | 26 | 74 | 318 |
| 1883 | 115,888 | 2 | 6 | 21 | 9 | 38 | 26 | 76 | 178 |
| 1884 | 117,791 | .. | 193 | 33 | 7 | 36 | 22 | 149 | 440 |
| 1885 | 119,724 | ... | 54 | 20 | 14 | 104 | 18 | 46 | 256 |
| 1886 | 121,690 | ... | 89 | 32 | 29 | 57 | 30 | 134 | 371 |
| 1887 | 123,687 | ... | 176 | 103 | 62 | 100 | 25 | 89 | 555 |
| 1888 | 125,717 | 13 | 53 | 66 | 36 | 40 | 24 | 43 | 275 |
| 1889 | 127,781 | ... | 126 | 54 | 16 | 127 | 20 | 78 | 421 |
| 1890 | 129,878 | ... | 95 | 25 | 6 | 82 | 15 | 96 | 319 |
| 1891 | 132,010 | ... | 97 | 25 | 18 | 71 | 27 | 68 | 306 |
| 1892 | 134,221 | 15 | 139 | 42 | 18 | 68 | 16 | 56 | 354 |
| 1893 | 136,469 | 65 | 29 | 16 | 16 | 56 | 26 | 140 | 348 |
| 1894 | 138,755 | 22 | 56 | 21 | 39 | 58 | 15 | 46 | 257 |
| 1895 | 141,079 | 23 | 97 | 16 | 25 | 57 | 26 | 143 | 387 |
| 1896 | 143,442 | ... | 165 | 56 | 34 | 53 | 23 | 72 | 403 |
| 1897 | 145,845 | ... | 96 | 21 | 9 | 77 | 19 | 145 | 367 |

# TABLE No 12.

## Weekly Means of Meteorological Observations for the year 1897.

| Date 1897 | Barometer reduced to Sea Level at 32·0 | Thermometer | Hygrometer | | % of Saturation | Temperatures. | | | | | | | Distance travelled by the Wind in 24 hours. | Pressure of Wind in lbs. per square foot. | Rainfall 12in. above ground. | Number of Days on which rain fell | Clouds covered = 10 clear = 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Dry | Wet | | Maximum in Shade | Minimum in Shade. | Maximum in Sun Black Bulb | Maximum in Sun Black Bulb in Vacuo | Minimum on Grass. | Temperature 12in. below surface. | Temperature 4 ft below surface. | | | | | |
| January 9 | 29·97 | 37 | 37 | 36 | 91 | 40 | 33 | 44 | 50 | 32 | 34 | 40 | 246 | ·52 | ·91 | 5 | 9 |
| 16 | 30·05 | 36 | 37 | 36 | 91 | 39 | 32 | 41 | 45 | 31 | 34 | 40 | 68 | ·04 | ·06 | 2 | 8 |
| 23 | 30·12 | 30 | 32 | 31 | 87 | 35 | 27 | 38 | 46 | 26 | 31 | 39 | 102 | ·09 | ·12 | 2 | 9 |
| 30 | 29·89 | 30 | 30 | 30 | 100 | 35 | 25 | 38 | 52 | 28 | 30 | 39 | 63 | ·03 | ·24 | 2 | 6 |
| February 6 | 29·60 | 34 | 34 | 34 | 100 | 38 | 36 | 38 | 44 | 31 | 31 | 38 | 92 | ·07 | 1·66 | 4 | 9 |
| 13 | 30·16 | 38 | 38 | 38 | 100 | 43 | 37 | 45 | 50 | 31 | 31 | 37 | 53 | ·02 | ·67 | 3 | 9 |
| 20 | 30·34 | 42 | 42 | 41 | 92 | 47 | 40 | 48 | 54 | 35 | 36 | 38 | 72 | ·04 | ·60 | 4 | 9 |
| 27 | 30·42 | 46 | 46 | 44 | 86 | 51 | 43 | 53 | 63 | 40 | 40 | 39 | 187 | ·30 | ·58 | 6 | 8 |
| March 6 | 29·45 | 38 | 39 | 36 | 77 | 44 | 33 | 49 | 66 | 31 | 37 | 40 | 145 | ·18 | ·88 | 5 | 9 |
| 13 | 29·95 | 39 | 39 | 37 | 84 | 44 | 34 | 49 | 64 | 31 | 36 | 40 | 105 | ·09 | ·64 | 4 | 8 |
| 20 | 29·58 | 43 | 43 | 40 | 78 | 46 | 38 | 51 | 68 | 36 | 38 | 40 | 201 | ·35 | ·44 | 5 | 8 |
| 27 | 29·88 | 48 | 48 | 46 | 86 | 53 | 44 | 57 | 71 | 42 | 42 | 41 | 192 | ·32 | ·82 | 6 | 10 |
| April 3 | 29·49 | 39 | 38 | 36 | 83 | 44 | 33 | 51 | 73 | 31 | 38 | 42 | 140 | ·17 | 1·30 | 4 | 7 |
| 10 | 30·03 | 43 | 41 | 38 | 77 | 45 | 34 | 53 | 75 | 30 | 38 | 42 | 116 | ·11 | ·45 | 2 | 6 |
| 17 | 29·89 | 45 | 44 | 42 | 85 | 50 | 38 | 58 | 80 | 36 | 41 | 42 | 192 | ·32 | 1·39 | 6 | 9 |
| 24 | 30·05 | 47 | 45 | 42 | 78 | 49 | 38 | 56 | 78 | 36 | 42 | 43 | 154 | ·20 | 1·11 | 4 | 8 |
| May 1 | 30·01 | 51 | 49 | 46 | 79 | 54 | 40 | 60 | 78 | 38 | 44 | 43 | 128 | ·14 | ·19 | 3 | 7 |
| 8 | 30·07 | 47 | 46 | 43 | 79 | 52 | 39 | 58 | 84 | 37 | 45 | 45 | 138 | ·16 | ·44 | 5 | 8 |
| 15 | 30·29 | 45 | 44 | 41 | 78 | 50 | 37 | 59 | 81 | 34 | 43 | 45 | 111 | ·10 | ·50 | 4 | 8 |
| 22 | 30·34 | 56 | 54 | 47 | 59 | 61 | 42 | 69 | 97 | 38 | 47 | 45 | 260 | ·58 | ... | | 2 |
| 29 | 29·73 | 53 | 52 | 48 | 74 | 60 | 43 | 68 | 93 | 39 | 50 | 47 | 127 | ·14 | 1·12 | 3 | 6 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| June | 5 | 30·12 | 58 | 56 | 53 | 81 | 63 | 49 | 69 | 91 | 47 | 52 | 48 | 73 | ·04 | 1·18 | 5 | 8 |
| | 12 | 30·22 | 58 | 55 | 52 | 81 | 61 | 49 | 68 | 91 | 47 | 53 | 50 | 94 | ·07 | ·95 | 3 | 8 |
| | 19 | 29·98 | 56 | 54 | 51 | 80 | 63 | 48 | 70 | 97 | 46 | 55 | 51 | 140 | ·17 | 1·48 | 4 | 8 |
| | 26 | 30·09 | 63 | 61 | 57 | 77 | 65 | 51 | 73 | 95 | 51 | 54 | 51 | 74 | ·05 | ·65 | 2 | 8 |
| July | 3 | 30·09 | 62 | 60 | 57 | 82 | 68 | 55 | 76 | 99 | 53 | 58 | 52 | 85 | ·06 | 1·24 | 4 | 8 |
| | 10 | 29·99 | 56 | 56 | 52 | 75 | 60 | 49 | 67 | 89 | 47 | 55 | 53 | 159 | ·22 | ·62 | 6 | 8 |
| | 17 | 30·30 | 67 | 66 | 57 | 56 | 73 | 50 | 80 | 107 | 47 | 58 | 54 | 85 | ·06 | ... | ... | 3 |
| | 24 | 30·01 | 66 | 69 | 58 | 50 | 69 | 54 | 77 | 95 | 49 | 59 | 55 | 56 | ·02 | ·20 | 1 | 7 |
| | 31 | 30.11 | 63 | 61 | 57 | 77 | 68 | 55 | 76 | 103 | 52 | 59 | 56 | 104 | ·09 | 1·08 | 4 | 7 |
| August | 7 | 30·08 | 71 | 70 | 61 | 57 | 78 | 57 | 85 | 110 | 52 | 61 | 57 | 99 | ·08 | 1·25 | 2 | 6 |
| | 14 | 29·96 | 62 | 61 | 56 | 72 | 66 | 52 | 74 | 96 | 49 | 60 | 57 | 142 | ·17 | ·52 | 6 | 8 |
| | 21 | 29·74 | 59 | 58 | 54 | 76 | 65 | 52 | 73 | 97 | 50 | 58 | 57 | 190 | ·31 | 1·02 | 7 | 7 |
| | 28 | 29·78 | 59 | 58 | 54 | 76 | 63 | 50 | 71 | 95 | 47 | 57 | 57 | 147 | ·19 | 1·11 | 6 | 7 |
| Septem. | 4 | 29·77 | 56 | 55 | 51 | 75 | 60 | 48 | 68 | 92 | 46 | 55 | 56 | 205 | ·36 | 2·58 | 7 | 7 |
| | 11 | 30·15 | 54 | 52 | 48 | 74 | 56 | 44 | 63 | 80 | 41 | 51 | 55 | 162 | ·23 | 1·38 | 3 | 7 |
| | 18 | 30·28 | 55 | 54 | 51 | 80 | 60 | 47 | 68 | 84 | 45 | 52 | 53 | 76 | ·05 | ·47 | 2 | 6 |
| | 25 | 29·88 | 54 | 54 | 50 | 74 | 58 | 45 | 65 | 85 | * | 51 | 53 | 216 | ·40 | ·39 | 2 | 6 |
| October | 2 | 30·10 | 54 | 54 | 52 | 86 | 60 | 45 | 66 | 82 | * | 50 | 52 | 67 | ·04 | 1·48 | 2 | 7 |
| | 9 | 30·43 | 51 | 49 | 46 | 79 | 54 | 42 | 59 | 73 | 36 | 48 | 52 | 102 | ·09 | ·64 | 3 | 7 |
| | 16 | 29·84 | 48 | 47 | 45 | 86 | 52 | 41 | 56 | 67 | 37 | 46 | 50 | 165 | ·23 | 1·55 | 6 | 7 |
| | 23 | 30·38 | 57 | 54 | 50 | 74 | 59 | 46 | 64 | 81 | 39 | 48 | 50 | 172 | ·26 | ... | ... | 6 |
| | 30 | 30·30 | 54 | 53 | 49 | 74 | 57 | 45 | 62 | 80 | 36 | 45 | 49 | 143 | ·18 | ... | ... | 4 |
| Novem. | 6 | 30·44 | 50 | 48 | 45 | 79 | 53 | 44 | 58 | 74 | 38 | 44 | 49 | 171 | ·25 | ... | ... | 6 |
| | 13 | 30·14 | 49 | 49 | 48 | 93 | 52 | 45 | 53 | 58 | 41 | 45 | 48 | 167 | ·24 | 1·18 | 4 | 8 |
| | 20 | 30·28 | 46 | 45 | 43 | 85 | 51 | 39 | 52 | 61 | 36 | 44 | 48 | 154 | ·20 | 1·45 | 5 | 8 |
| | 27 | 30·50 | 43 | 44 | 43 | 92 | 47 | 39 | 49 | 51 | 35 | 43 | 47 | 35 | ·01 | ·61 | 1 | 10 |
| Decem. | 4 | 29·91 | 36 | 37 | 35 | 83 | 42 | 32 | 43 | 48 | 27 | 38 | 46 | 152 | ·20 | 3·22 | 6 | 9 |
| | 11 | 29·64 | 39 | 39 | 38 | 92 | 44 | 35 | 45 | 48 | 32 | 38 | 44 | 257 | ·57 | 2·97 | 6 | 10 |
| | 18 | 29·81 | 43 | 44 | 43 | 92 | 48 | 38 | 51 | 55 | 32 | 38 | 44 | 218 | ·41 | 1·46 | 6 | 9 |
| | 25 | 30·56 | 36 | 36 | 34 | 82 | 41 | 32 | 45 | 54 | 25 | 36 | 43 | 126 | ·14 | ·01 | 1 | 3 |
| 1898 | | | | | | | | | | | | | | | | | | |
| January | 1 | 29·62 | 43 | 44 | 42 | 85 | 47 | 37 | 49 | 57 | 31 | 35 | 42 | 288 | ·72 | ·43 | 4 | 8 |
| Means | | 30·03 | 49 | 48 | 45 | 79 | 53 | 42 | 59 | 75 | 37 | 45 | 47 | 139 | ·17 | 45·24 Totals. | 187 | 7 |

* Out of order.

# TABLE No. 13.

Prices of Coal, Bread, Flour, Butchers' Meat, and Potatoes, and the number of Paupers relieved in Oldham, 1885-97.

| | Coal per Ton. | Bread per dozen lbs. | Flour, per load of 280 lbs. | Meat per lb. | Potatoes, per load of 252 lbs. | Weekly No. of Indoor Poor. |
|---|---|---|---|---|---|---|
| | s. d. | d. | s. d. | d. | s. d. | |
| 1885 | 7 9 | 11¼ | ... | 5 | 6 5 | 890 |
| 1886 | 8 0 | 11¼ | ... | 5¼ | 7 4 | 931 |
| 1887 | 7 6 | ... | 24 6 | 4½ | 8 10 | 910 |
| 1888 | 7 6 | ... | 25 3 | 5 | 6 4 | 936 |
| 1889 | 8 4 | ... | 26 10 | 5 | 7 6 | 946 |
| 1890 | 10 10 | ... | 26 10 | 4⅞ | 6 11 | 921 |
| 1891 | 10 7 | ... | 29 2 | 4⅞ | 10 2 | 901 |
| 1892 | 9 7 | ... | 26 3 | 4⅝ | 7 4 | 937 |
| 1893 | 11 7 | ... | 21 6 | 4½ | 6 6 | 1,011 |
| 1894 | 9 4 | ... | 18 4 | 4¼ | 6 6 | 1,075 |
| 1895 | 7 8 | ... | 17 0 | 4⅛ | 6 9 | 1,089 |
| 1896 | 7 4 | ... | 20 0 | 3¾ | 5 11 | 1,037 |
| 1897 | 7 4 | ... | 24 7 | 3½ | 6 5¾ | 1,061 |

# TABLE No. 14.

Return of Inquests held in Oldham, touching the cause of death of any person, for the year ended 31st December, 1897.

| INQUESTS. | Males. | Females. |
|---|---|---|
| Infants (Legitimate), under 1 year | 22 | 16 |
| ,, 1 year and under 7 years | 10 | 14 |
| Infants (Illegitimate or unknown) under 1 year | 4 | 4 |
| ,, 1 year and under 7 years | 1 | 1 |
| Children, 7 years and under 16 | 6 | 0 |
| Youths, 16 years and under 25 | 10 | 2 |
| Adults, 25 years and under 60 | 39 | 13 |
| Aged, 60 years and above | 13 | 11 |
| Total | 105 | 61 |

| VERDICTS. | Males. | Females. |
|---|---|---|
| Murder | ... | 1 |
| Manslaughter | 1 | ... |
| Suicide, while Insane | 13 | 4 |
| Accidental Death | 39 | 12 |
| Found Dead | 5 | 5 |
| Excessive Drinking | 3 | 0 |
| Natural Causes | 44 | 39 |
| Total Costs | £289 0 8 | |

# TABLE No. 15.

## BOROUGH OF OLDHAM.

Deaths Registered at Several Groups of Ages from Different Causes during the 52 Weeks ending January 1st, 1898.

| Cause of Death. | AGES. | | | | | | | | | | | | | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 to 1 | 1 to 5 | Total under 5 years | 5 to 15 | 15 to 25 | 25 to 35 | 35 to 45 | 45 to 55 | 55 to 60 | 60 to 65 | 65 to 75 | 75 to 85 | 85 and upwards | |
| *Classes.* | | | | | | | | | | | | | | |
| I.—Specific Febrile, or Zymotic Diseases ... | 186 | 193 | 379 | 52 | 61 | 78 | 71 | 43 | 20 | 14 | 18 | 7 | ... | 743 |
| II.—Parasitic Diseases ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | .. | ... | ... |
| III.—Dietetic Diseases ... | ... | ... | ... | ... | ... | 5 | 10 | 5 | 3 | ... | 1 | ... | ... | 24 |
| IV.—Constitutional Diseases... | 3 | 6 | 9 | 3 | 9 | 8 | 17 | 42 | 16 | 18 | 27 | 13 | ... | 162 |
| V.—Developmental Diseases... | 86 | ... | 86 | ... | 1 | ... | ... | ... | ... | 4 | 19 | 43 | 10 | 163 |
| VI.—Local Diseases ..... | 272 | 193 | 465 | 68 | 57 | 75 | 127 | 166 | 102 | 99 | 185 | 86 | 4 | 1434 |
| VII.—Deaths from Violence | 8 | 8 | 16 | 4 | 6 | 4 | 7 | 12 | 4 | ... | 9 | 3 | ... | 65 |
| VIII.—Deaths from Ill-defined and Not Specified Causes ... | 141 | 8 | 149 | 6 | 5 | 4 | 3 | 10 | 3 | 3 | 7 | 5 | ... | 195 |
| Totals ..... | 696 | 408 | 1104 | 133 | 139 | 174 | 235 | 278 | 148 | 138 | 266 | 157 | 14 | 2786 |
| I.—Specific Febrile, or Zymotic Diseases. | | | | | | | | | | | | | | |
| 1. *Miasmatic Diseases.* | | | | | | | | | | | | | | |
| Smallpox ..... | ... | ... | ... | ... | ... | . | ... | ... | ... | ... | ... | ... | ... | ... |
| Measles..... | 25 | 61 | 86 | 10 | .. | ... | ... | ... | ... | ... | ... | ... | .. | 96 |
| Scarlet Fever ..... | 2 | 10 | 12 | 7 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 21 |
| Typhus .. ..... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 2 |
| Whooping Cough ..... | 27 | 47 | 74 | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 77 |
| Diphtheria ..... | 1 | 7 | 8 | 1 | .. | ... | ... | ... | ... | .. | ... | ... | ... | 9 |
| Simple Continued and Ill-defined Fever ..... | .. | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... |
| Enteric or Typhoid Fever .. ... | ... | 1 | 1 | 2 | 7 | 5 | 1 | 1 | ... | ... | ... | ... | ... | 17 |
| Tabes Mesenterica ..... | 4 | 6 | 10 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 11 |
| Tubercular Meningitis, Hydrocephalus ..... | 12 | 20 | 32 | 9 | ... | ... | ... | 1 | ... | ... | .. | ... | ... | 42 |
| Phthisis ..... | 2 | 4 | 6 | 9 | 40 | 61 | 55 | 29 | 13 | 9 | 9 | 1 | ... | 232 |
| Other Forms of Tuberculosis, Scrofula ..... | 4 | 4 | 8 | 5 | 3 | 5 | 3 | 2 | 1 | ... | ... | ... | ... | 27 |
| Other Miasmatic Diseases..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Influenza ..... ..... | 1 | ... | 1 | 3 | 3 | 3 | 8 | 3 | 2 | 1 | 6 | 1 | ... | 31 |
| 2. *Diarrhœal Diseases.* | | | | | | | | | | | | | | |
| Simple Cholera ..... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... |
| Diarrhœa, Dysentery ..... | 99 | 31 | 130 | 1 | 2 | 1 | ... | 1 | 1 | 2 | 3 | 4 | ... | 145 |

TABLE No. 15—Continued.

| Cause of Death. | AGES. | | | | | | | | | | | | | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 to 1 | 1 to 5 | Total under 5 years | 5 to 15 | 15 to 25 | 25 to 35 | 35 to 45 | 45 to 55 | 55 to 60 | 60 to 65 | 65 to 75 | 75 to 85 | 85 and upwards | |
| 3. *Malarial Diseases.* | | | | | | | | | | | | | | |
| Remittent Fever | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ague | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 4. *Zoogenous Diseases.* | | | | | | | | | | | | | | |
| Cowpox and Effects of Vaccination | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other Diseases, Hydrophobia, Glanders, Splenic Fever | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 5. *Venereal Diseases.* | | | | | | | | | | | | | | |
| Syphilis | 6 | 2 | 8 | ... | ... | 1 | 1 | 2 | 1 | ... | ... | ... | ... | 13 |
| Gonorrhœa, Stricture of Urethra | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | 3 |
| 6. *Septic Diseases.* | | | | | | | | | | | | | | |
| Erysipelas | 3 | ... | 3 | ... | 1 | ... | ... | 3 | ... | 1 | ... | 1 | ... | 9 |
| Pyæmia, Septicæmia | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | 1 | ... | ... | ... | 3 |
| Puerperal Fever | ... | ... | .. | ... | 2 | 1 | 2 | ... | ... | ... | ... | ... | ... | 5 |
| II.—Parasitic Diseases. | | | | | | | | | | | | | | |
| Thrush, and other Vegetable Parasitic Diseases | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Worms, Hydatids, and other Animal Parasitic Diseases. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| III.—Dietetic Diseases. | | | | | | | | | | | | | | |
| Want of Breast Milk, Starvation | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... |
| Scurvy | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Chronic Alcoholism | ... | ... | ... | ... | ... | 4 | 9 | 5 | 3 | ... | 1 | ... | ... | 22 |
| Delirium Tremens | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | 2 |
| IV.—Constitutional Diseases. | | | | | | | | | | | | | | |
| Rheumatic Fever, Rheumatism of the Heart | ... | ... | ... | 1 | 6 | 5 | 1 | 1 | ... | ... | ... | ... | ... | 14 |
| Rheumatism | ... | ... | ... | ... | ... | ... | 3 | 3 | 1 | 1 | 1 | 1 | ... | 10 |
| Gout | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Rickets | 1 | 6 | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 7 |
| Cancer, Malignant Disease | ... | .. | ... | ... | ... | 2 | 12 | 34 | 14 | 14 | 23 | 11 | ... | 110 |
| Purpura, Hæmorrhagic Diathesis | 1 | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| Anæmia, Chlorosis, Leucocythæmia | 1 | ... | 1 | .. | 1 | ... | 1 | 2 | ... | 2 | 2 | ... | ... | 9 |
| Glycosuria, Diabetes Mellitus | ... | ... | ... | ... | 2 | 1 | ... | 2 | ... | ... | 1 | 1 | ... | 7 |
| Other Constitutional Diseases | ... | .. | ... | 1 | ... | ... | .. | ... | 1 | ... | ... | ... | ... | 2 |

TABLE No. 15—Continued

| Cause of Death. | AGES. | | | | | | | | | | | | | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 to 1 | 1 to 5 | Total under 5 years | 5 to 15 | 15 to 25 | 25 to 35 | 35 to 45 | 45 to 55 | 55 to 60 | 60 to 65 | 65 to 75 | 75 to 85 | 85 and upwards | |
| **V.—Developmental Diseases.** | | | | | | | | | | | | | | |
| Premature Birth | 75 | ... | 75 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 75 |
| Atelectasis | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | 1 |
| Congenital Malformations | 10 | ... | 10 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 11 |
| Old Age | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | 19 | 43 | 10 | 76 |
| **VI.—Local Diseases.** | | | | | | | | | | | | | | |
| 1. *Diseases of Nervous System.* | | | | | | | | | | | | | | |
| Inflammation of Brain or Membranes | 15 | 23 | 38 | 16 | 2 | 4 | 2 | 4 | 1 | ... | ... | 1 | ... | 68 |
| Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis. | ... | ... | ... | ... | 2 | 1 | 16 | 28 | 19 | 12 | 46 | 21 | ... | 145 |
| Insanity, General Paralysis of the Insane | ... | ... | ... | ... | ... | ... | . | . | ... | ... | ... | 1 | ... | 1 |
| Epilepsy | ... | ... | ... | 1 | ... | 2 | 3 | 2 | ... | 1 | ... | ... | ... | 9 |
| Convulsions | 56 | 14 | 70 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 72 |
| Laryngismus Stridulus (Spasm of Glottis) | 1 | 1 | 2 | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | 2 |
| Disease of Spinal Cord, Paraplegia, Paralysis Agitans | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Other Diseases of Nervous System | 1 | ... | 1 | ... | ... | 2 | 2 | 1 | 1 | 2 | 1 | .. | ... | 10 |
| 2. *Diseases of Organs of Special Sense.* | | | | | | | | | | | | | | |
| Of Ear, Eye, Nose | ... | 1 | 1 | 1 | 2 | 1 | ... | 1 | ... | ... | ... | ... | ... | 6 |
| 3. *Diseases of Circulatory System.* | | | | | | | | | | | | | | |
| Pericarditis | ... | ... | ... | ... | 1 | ... | ... | .. | .. | ... | ... | ... | ... | 1 |
| Acute Endocarditis | ... | 1 | 1 | .. | 2 | 2 | ... | ... | ... | ... | 2 | ... | ... | 7 |
| Valvular Diseases of Heart | ... | ... | ... | 5 | 4 | 6 | 6 | 7 | 7 | 5 | 12 | 3 | ... | 55 |
| Other Diseases of Heart | .. | ... | ... | 4 | 7 | 7 | 15 | 19 | 17 | 19 | 34 | 20 | .. | 142 |
| Aneurism | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | 2 |
| Embolism, Thrombosis | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | 1 | ... | 3 |
| Other Diseases of Blood Vessels | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 4 | 1 | 6 |
| 4. *Diseases of Respiratory System.* | | | | | | | | | | | | | | |
| Laryngitis | 2 | 2 | 4 | .. | ... | ... | ... | ... | ... | .. | ... | ... | ... | 4 |
| Croup | 3 | 14 | 17 | 3 | ... | ... | .. | ... | ... | ... | ... | ... | ... | 20 |
| Emphysema, Asthma | 1 | ... | 1 | ... | ... | ... | ... | 3 | 2 | 1 | 2 | 1 | ... | 10 |
| Bronchitis | 77 | 28 | 105 | 2 | 2 | 9 | 13 | 25 | 25 | 21 | 48 | 21 | 3 | 274 |
| Pneumonia | 61 | 78 | 139 | 21 | 13 | 22 | 23 | 32 | 9 | 21 | 17 | 5 | ... | 302 |
| Pleurisy | 1 | ... | 1 | ... | ... | 2 | 1 | 2 | 1 | ... | ... | 1 | ... | 8 |
| Other Diseases of Respiratory System | 4 | 3 | 7 | ... | ... | ... | 1 | ... | 1 | ... | 1 | ... | ... | 10 |

## TABLE No. 15—Continued.

| Cause of Death. | AGES. | | | | | | | | | | | | | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 to 1 | 1 to 5 | Total under 5 years | 5 to 15 | 15 to 25 | 25 to 35 | 35 to 45 | 45 to 55 | 55 to 60 | 60 to 65 | 65 to 75 | 75 to 85 | 85 and upwards | |
| 5. *Diseases of Digestive System.* | | | | | | | | | | | | | | |
| Dentition | 14 | 9 | 23 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 23 |
| Sore Throat, Quinsy | 1 | 1 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| Diseases of Stomach | ... | 2 | 2 | ... | 2 | 2 | 1 | 3 | 2 | 1 | 3 | ... | ... | 16 |
| Enteritis | 22 | 9 | 31 | 2 | 2 | 2 | 3 | 4 | 1 | 2 | 1 | ... | ... | 48 |
| Obstructive Diseases of Intestines | 1 | ... | 1 | ... | 1 | ... | 4 | 4 | 2 | ... | 1 | ... | ... | 13 |
| Hernia | ... | ... | ... | ... | ... | ... | 2 | 1 | 3 | 1 | 1 | ... | ... | 8 |
| Peritonitis | 3 | 1 | 4 | 3 | 3 | 1 | 1 | ... | ... | ... | 1 | ... | ... | 13 |
| Ascites | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... |
| Cirrhosis of Liver | ... | ... | ... | ... | ... | ... | 4 | 12 | 5 | 3 | 1 | 1 | ... | 26 |
| Jaundice and other Diseases of Liver | 2 | 1 | 3 | 1 | ... | ... | 3 | 2 | 1 | ... | 1 | ... | ... | 11 |
| Other Diseases of Digestive System | 3 | 1 | 4 | 1 | ... | 1 | ... | 2 | ... | .. | 2 | .. | ... | 10 |
| 6. *Diseases of Lymphatic System.* | | | | | | | | | | | | | | |
| Of Lymphatics and of Spleen | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 7. *Diseases of Glandlike Organs of Uncertain Use.* | | | | | | | | | | | | | | |
| Bronchocele, Addison's Disease | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| 8. *Diseases of Urinary System.* | | | | | | | | | | | | | | |
| Nephritis | ... | 1 | 1 | 1 | 5 | 3 | 7 | 3 | ... | 3 | 2 | 1 | ... | 26 |
| Bright's Disease, Albuminuria | ... | ... | ... | ... | 2 | 1 | 6 | 6 | 2 | 1 | 1 | ... | ... | 19 |
| Disease of Bladder or of Prostate | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 | 2 | ... | 6 |
| Other Diseases of the Urinary System | ... | ... | ... | ... | ... | 1 | 2 | 2 | 1 | 1 | 1 | ... | ... | 8 |
| 9. *Diseases of Reproductive System.* | | | | | | | | | | | | | | |
| A. *Of Organs of Generation.* | | | | | | | | | | | | | | |
| Male Organs | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Female Organs | ... | ... | ... | ... | 2 | 1 | 1 | ... | ... | ... | ... | ... | ... | 4 |
| B. *Of Parturition.* | | | | | | | | | | | | | | |
| Abortion, Miscarriage | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Puerperal Convulsions | ... | ... | ... | ... | 2 | ... | 1 | ... | ... | ... | ... | ... | ... | 3 |
| Placenta prævia, Flooding | ... | ... | ... | ... | ... | 1 | 2 | ... | ... | ... | ... | ... | ... | 3 |
| Other Accidents of Childbirth | ... | ... | ... | ... | 3 | 3 | 6 | ... | ... | .. | ... | ... | ... | 12 |
| 10. *Diseases of Bones and Joints.* | | | | | | | | | | | | | | |
| Caries, Necrosis | ... | ... | ... | 3 | ... | ... | 1 | 2 | 2 | ... | 1 | 3 | ... | 12 |
| Arthritis, Ostitis, Periostitis | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other Diseases of Bones and Joints | ... | 2 | 2 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 |

## TABLE No. 15—Continued.

| Cause of Death. | AGES. | | | | | | | | | | | | | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 to 1 | 1 to 5 | Total under 5 years. | 5 to 15 | 15 to 25 | 25 to 35 | 35 to 45 | 45 to 55 | 55 to 60 | 60 to 65 | 65 to 75 | 75 to 85 | 85 and upwards | |
| 11. *Diseases of Integumentary System.* | | | | | | | | | | | | | | |
| Carbuncle, Phlegmon.. ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other Diseases of Integumentary System ..... | 4 | 1 | 5 | ... | ... | ... | ... | ... | ... | 2 | 1 | ... | ... | 8 |
| VII.—Deaths from Violence. | | | | | | | | | | | | | | |
| 1. *Accident or Negligence.* | | | | | | | | | | | | | | |
| Fractures and Contusions..... | .. | 2 | 2 | 1 | 5 | 3 | 2 | 5 | 2 | ... | 5 | 3 | ... | 28 |
| Gunshot Wounds ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cut, Stab ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Burn, Scald ..... | 1 | 6 | 7 | 2 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 10 |
| Poison ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Drowning ..... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Suffocation ..... | 6 | ... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6 |
| Otherwise..... | 1 | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| 2. *Homicide.* | | | | | | | | | | | | | | |
| Manslaughter ..... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | .. | ... | ... | ... | 1 |
| Murder..... ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| 3. *Suicide.* | | | | | | | | | | | | | | |
| Gunshot Wounds ..... ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cut, Stab ..... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | ... | ... | ... | ... | 3 |
| Poison ..... ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Drowning ..... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 2 |
| Hanging ..... | ... | ... | ... | ... | ... | 1 | 3 | 2 | 1 | ... | 3 | ... | ... | 10 |
| Otherwise... ..... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... |
| VIII.—Deaths from Ill-Defined and not Specified Causes. | | | | | | | | | | | | | | |
| Dropsy ..... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 2 |
| Debility, Atrophy, Inanition... | 109 | 1 | 110 | 1 | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 113 |
| Mortification ..... | ... | .. | ... | ... | ... | 1 | ... | ... | ... | 1 | 3 | ... | ... | 5 |
| Tumour..... ..... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | 4 |
| Abscess..... ..... | 1 | ... | 1 | ... | 2 | 1 | ... | 1 | ... | ... | ... | ... | ... | 5 |
| Hœmorrhage ..... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Sudden Death (cause not ascertained) ..... | 7 | ... | 7 | 1 | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | 10 |
| Causes not Specified or Ill-defined ..... | 23 | 7 | 30 | 2 | 3 | 2 | 2 | 8 | ... | 1 | 4 | 3 | ... | 55 |

# INFECTIOUS DISEASES.

## Part II.

# INFECTIOUS DISEASES.

---

The total number of cases of Infectious diseases notified during the year 1897 was 468, which is 544 less than last year, and 518 less than the average for the preceding five years.

Of the notifiable diseases, 332 cases of Scarlet Fever, 38 of Diphtheria, 2 of Typhus Fever, 86 of Enteric or Typhoid Fever, and 10 cases of Puerperal Fever were reported during the year 1897. This shows a decrease on the previous year of 453 cases of Scarlet Fever, 6 cases of Typhus Fever, 28 cases of Enteric or Typhoid Fever, 7 cases of Puerperal Fever, 27 cases of Smallpox, and 23 cases of Diphtheria.

In addition to the diseases notified, the Borough has also suffered from epidemics of Measles, with 96 deaths, and Whooping Cough, with 77 deaths, as compared with 165 and 53 deaths respectively in 1896.

This exceedingly small amount of Infectious sickness has not, however, caused the Zymotic death rate to fall, owing to the epidemic of Diarrhœa in the summer, which caused 145 deaths, and this raised the Zymotic death rate to 2·5, as compared with 2·8 in 1896.

## SMALLPOX.

The Borough has, fortunately, escaped Smallpox during the year.

The Hospital at Strinesdale has been kept in a constant state of readiness should any cases occur, and every preparation has been made to deal with infection should it occur.

## SCARLET FEVER.

(Table No. 16.)

There were 332 cases of Scarlet Fever notified during 1897. Among these 332 cases 20 deaths occurred, giving a death rate of 6·0 per cent. This is a slight decrease on the death rate of 1895 and 1896, when it was respectively 6·9 and 8·0 per cent.

The cases were spread over the whole year, being most numerous in January, and thus being apparently the tail end of the epidemic of 1896.

In respect to district, Westwood and Hartford Wards suffered most, with 60 and 50 cases respectively, while Waterhead suffered least, having only 12 cases during the year.

With regard to age, 76 per cent. of the cases were in children under 10 years of age, and 34 per cent. of the cases were under five years of age; the mortality, as might be expected, was much more severe among those under five years of age.

Under five years of age the percentage of deaths to cases was 8·8, against 16·6 last year; from 5 to 10 years of age it was 5·8 per cent., against 4·5 last year; from

# BOROUGH OF OLDHAM.

## CASES OF INFECTIOUS DISEASE

Notified during the year 1897.




W.E.CLEGG, LITH. OLDHAM.

10 to 15 years there were no deaths, against 3·4 per cent. last year; 15 to 25 years, 7·7 per cent., against 2·1 last year; and among the cases above 25 years of age no deaths occurred.

Westhulme Hospital was open for the reception of Scarlet Fever cases during the whole year, and 140 cases were isolated in the Hospital, or 42 per cent. of the whole, against 47 per cent. last year.

The deaths among cases admitted to Hospital numbered eight, giving a death rate of 5·6 per cent., which compares favourably with the death rate among the cases remaining at their own homes, which was 6·2 per cent.

The percentage of cases removed is smaller than last year, but this is due to the difficulties caused by alterations at the Hospital, which have handicapped us throughout the year.

## DIPHTHERIA.

(Table No. 17.)

There were 38 cases of Diphtheria notified during 1897, and 10 died, giving a death rate of 26·3 per cent. of the cases, which is a gratifying decrease on last year, when the numbers were 61 cases, with a death rate of 50 per cent. In 1895 there were 70 cases, with a death rate of 40 per cent.; in 1894, 67 cases, with a death rate of 53 per cent.; so that, speaking generally, the cases and mortality do not vary to any marked degree.

The deaths were confined to cases under 10 years of age; of those there were 27 cases and 10 deaths, giving a death rate of 37 per cent.

The cases of Diphtheria were spread over the whole year, Clarksfield Ward and St. Peter's suffering most, with 10 and 9 cases respectively; St. Mary's, Werneth, and Hollinwood escaped.

## ENTERIC OR TYPHOID FEVER.

(Table No. 18.)

There were 86 cases of Enteric or Typhoid Fever during the year 1897, and of those 17 died, giving a death rate of 19·8 per cent.

In 1896 there were 114 cases, with a death rate of 19 per cent.

The cases occurred throughout the year, being most prevalent in the month of November. Westwood and Waterhead Wards suffered most severely, with 13 cases each, while Mumps Ward had no cases.

Thirty cases, or 36 per cent. of the total, were isolated by removal to Westhulme Hospital, and six of those died, giving a death rate of 19 per cent., against 24 per cent. removed last year, with a death rate of 18 per cent.

In connection with Diphtheria and Typhoid Fever, the Committee decided to try the effect of having a Bacteriological test made as far as possible in each case, and arrangements were made with the Owens College, through the kindness of Professor Delêpine, to have the tests made in that institution. Specimen tubes are now kept at the Sanitary Office for the use of Medical Practitioners, and all results are forwarded to them as quickly as possible.

With regard to Diphtheria, the Committee also decided to keep a stock of fresh Antitoxin Serum at the Central

Police Station, where it can be obtained by the Medical Practitioners at any time of the day or night free of charge.

## TYPHUS FEVER.

(Table No. 19.)

Two cases of Typhus Fever were reported, the diagnosis of which was somewhat doubtful. Each case died before removal was possible, and no further infection occurred in either. There was no connection between the two cases.

## PUERPERAL FEVER.

During the year 1897, 10 cases of Puerperal Fever were notified, and five deaths from this disease were registered, against 17 cases and 13 deaths in the previous year.

There was no epidemic prevalence of this disease, the cases being spread over the year and in different parts of the town.

## MEASURES TO PREVENT THE SPREAD OF INFECTIOUS DISEASE.

Isolation.—140 cases of Scarlet Fever, 31 cases of Typhoid Fever and 43 cases of Measles (the latter being from the Union Workhouse) were removed to Westhulme Hospital, compared with 371 cases of Scarlet Fever, 27 of Typhoid Fever and 12 cases of Measles in 1896.

Disinfection.—The houses are fumigated by burning sulphur, the walls stripped, and notices served for cleansing after cases of any of the notifiable diseases, after deaths from Phthisis, and when requested after cases of Influenza and Measles.

All Typhoid Fever excreta is placed into special pails and burnt at the destructor.

Disinfecting fluid, powder, and soap are distributed freely to the houses where infectious diseases occur.

The drains in all cases of Enteric Fever, Diphtheria, and Puerperal Fever are tested by the smoke machine.

Clothes, bedding, &c., are brought to the disinfector at Rhodes Bank, and disinfected by steam at a temperature of about 260° F.

In all cases of Smallpox, in addition to fumigating the houses, disinfection of bedding, clothing, &c., persons who have been in contact with the case are brought to the disinfecting station, where they are bathed while their clothes are disinfected.

School Closing.—During the year it was found necessary to close three schools for a period of three weeks each, owing to an epidemic of Measles, a measure which was attended with great success.

Strinesdale Hospital was kept constantly prepared for the reception of cases of Smallpox, but, fortunately, it was not required.

At Westhulme considerable difficulty and inconvenience has been experienced in dealing with the cases, owing to the alterations which are now being carried out. The new Laundry, with steam disinfector, the Porter's Lodge and Discharge Room, and the Isolation Block have been finished, and are now in regular use, but the staff will continue to suffer great inconvenience until the new Administrative Block is finished.

# TABLE No. 16.

## SCARLET FEVER.

| Ages | Cases. | Deaths. | |
|---|---|---|---|
| | | Total. | Percentage. |
| Under 5 years ..... | 114 | 10 | 8·8 |
| 5 to 10 .. ... ... | 138 | 8 | 5·8 |
| 10 to 15... ... ... | 53 | ... | ... |
| 15 to 25... ... ... | 26 | 2 | 7·7 |
| 25 to 35 .. ... .. | 1 | ... | ... |
| 35 to 45... ... ... | ... | ... | ... |
| 45 to 55... ... ... | ... | ... | ... |
| Over 55 ... ... | ... | ... | ... |
| Total ... ... | 332 | 20 | 6·0 |

# TABLE No. 17.

## DIPHTHERIA.

| Ages. | Cases. | Deaths. | |
|---|---|---|---|
| | | Total. | Percentage. |
| Under 5 years ..... | 18 | 9 | 50·0 |
| 5 to 10 ..... | 9 | 1 | 11·1 |
| 10 to 15 ..... | 2 | ... | .. |
| 15 to 25 ..... | 4 | ... | ... |
| 25 to 35 ..... | 4 | ... | ... |
| 35 to 45 ..... | 1 | ... | ... |
| 45 to 55 ..... | ... | ... | ... |
| Over 55 ..... | ... | ... | ... |
| Total ..... | 38 | 10 | 26·3 |

# TABLE No. 18.

## TYPHOID OR ENTERIC FEVER.

| Ages. | Cases. | Deaths. | |
|---|---|---|---|
| | | Total. | Percentage. |
| Under 5 years ... | 5 | ... | ... |
| 5 to 10... .. ... | 13 | 1 | 7·7 |
| 10 to 15... ... ... | 13 | 1 | 7·7 |
| 15 to 25... ... ... | 33 | 8 | 24·2 |
| 25 to 35... ... ... | 14 | 5 | 35·7 |
| 35 to 45... ... ... | 3 | 1 | 33·3 |
| 45 to 55... ... ... | 4 | 1 | 25·0 |
| Over 55 .. ... | 1 | ... | ... |
| Total ... ... | 86 | 17 | 19·8 |

# TABLE No. 19.

## TYPHUS FEVER.

| Ages. | Cases. | Deaths. | |
|---|---|---|---|
| | | Total. | Percentage. |
| Under 5 years ..... | ... | ... | ... |
| 5 to 10 ..... | 1 | 1 | 100·0 |
| 10 to 15 ..... | ... | ... | ... |
| 15 to 25 ..... | ... | ... | ... |
| 25 to 35 ..... | 1 | 1 | 100·0 |
| 35 to 45 ..... | ... | ... | ... |
| 45 to 55 .. ... | ... | ... | ... |
| Over 55 ..... | ... | ... | ... |
| Total ..... | 2 | 2 | 100·0 |

# TABLE No. 20.

Showing the number of **Cases of Sickness** and the **Deaths Registered** during the several months of the year 1897 in Oldham.

| Months. | Smallpox. | | Scarlet Fever. | | Diph-theria. | | Typhoid Fever. | | Puer-peral Fever. | | Typhus Fever | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases. | Deaths. | Cases. | Deaths. | Cases. | Deaths. | Cases. | Deaths. | Cases. | Deaths. | Cases. | Deaths. |
| January ... | ... | ... | 53 | 3 | 7 | 3 | 11 | ... | 2 | 1 | 2 | 2 |
| February... | ... | ... | 39 | 4 | 7 | 3 | 6 | ... | ... | ... | ... | ... |
| March ..... | ... | ... | 44 | 3 | 4 | ... | 9 | 1 | 1 | 1 | ... | ... |
| April ..... | ... | ... | 36 | 2 | 3 | 2 | 7 | 2 | 1 | ... | ... | ... |
| May ..... | ... | ... | 22 | ... | 1 | ... | 5 | 2 | ... | 1 | ... | ... |
| June..... | ... | ... | 12 | 1 | 2 | 1 | 3 | 1 | 1 | ... | ... | ... |
| July ..... | ... | ... | 25 | 2 | 1 | ... | 4 | 1 | ... | ... | ... | ... |
| August..... | ... | ... | 18 | 2 | 2 | ... | 3 | ... | ... | ... | ... | ... |
| September | ... | ... | 14 | ... | ... | ... | 8 | 1 | ... | ... | ... | ... |
| October ... | ... | ... | 20 | 2 | 4 | ... | 10 | 3 | 3 | 1 | ... | ... |
| November | ... | ... | 23 | 1 | 6 | ... | 13 | 3 | 1 | ... | ... | ... |
| December | ... | ... | 26 | 1 | 1 | ... | 7 | 3 | 1 | 1 | ... | ... |
| Totals ... | ... | ... | 332 | 21 | 38 | 9 | 86 | 17 | 10 | 5 | 2 | 2 |

# TABLE

Table of Population, Births, and of New Cases of Infectious Sickness, year 1897, in the County Borough of

Ages and

| Names of Localities. | Population at all Ages. | | Registered Births. | Aged under 5 or over 5. | New Cases of Sickness knowledge of the | | |
|---|---|---|---|---|---|---|---|
| | Census, 1891. | Estimated to middle of 1897. | | | Smallpox. | Scarlatina. | Diphtheria. |
| St. Mary's ..... | 9,031 | 11,586 | 347 | Under 5 | ... | 15 | ... |
| | | | | 5 upwards. | ... | 11 | ... |
| St. Peter's ..... | 11,798 | 13,181 | 290 | Under 5 | ... | 6 | 2 |
| | | | | 5 upwards. | ... | 22 | 7 |
| Werneth ..... | 11,747 | 13,270 | 321 | Under 5 | ... | 7 | ... |
| | | | | 5 upwards. | ... | 13 | ... |
| Westwood (H) | 11,637 | 12,864 | 346 | Under 5 | ... | 23 | 2 |
| | | | | 5 upwards. | ... | 37 | ... |
| St. Paul's ..... | 10,191 | 11,406 | 305 | Under 5 | ... | 14 | 1 |
| | | | | 5 upwards. | ... | 24 | ... |
| Coldhurst ..... | 13,688 | 11,697 | 310 | Under 5 | ... | 4 | 1 |
| | | | | 5 upwards. | ... | 22 | ... |
| Hartford ..... | 12,679 | 13,802 | 323 | Under 5 | ... | 19 | 2 |
| | | | | 5 upwards. | ... | 31 | 1 |
| Hollinwood..... | 7,652 | 8,642 | 308 | Under 5 | ... | 2 | ... |
| | | | | 5 upwards. | ... | 12 | ... |
| Clarksfield ..... | 11,615 | 13,588 | 370 | Under 5 | ... | 9 | 5 |
| | | | | 5 upwards. | ... | 16 | 5 |
| Mumps ..... ... | 7,733 | 9,967 | 247 | Under 5 | ... | 7 | 1 |
| | | | | 5 upwards. | ... | 8 | 1 |
| St. James' ..... | 10,735 | 11,500 | 255 | Under 5 | ... | 6 | 1 |
| | | | | 5 upwards. | ... | 12 | 2 |
| Waterhead (H) | 12,957 | 14,342 | 371 | Under 5 | ... | 2 | 3 |
| | | | | 5 upwards. | ... | 10 | 4 |
| Totals..... | 131,463 | 145,845 | 3,793 | Under 5 | ... | 114 | 18 |
| | | | | 5 upwards. | ... | 218 | 20 |
| | | | Grand | Total ..... | .. | 332 | 38 |

No. 21.

coming to the knowledge of the Medical Officer of Health, during the
Oldham; classified according to Diseases,
Localities.

| in each locality, coming to the Medical Officer of Health. | | | | Number of such Cases removed from their homes in the several localities for treatment in Isolation Hospital. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Fevers. | | | | | | | Fevers. | | | |
| Typhus. | Enteric or Typhoid. | Puerperal. | Erysipelas. | Smallpox. | Scarlatina. | Diphtheria. | Typhus. | Enteric or Typhoid. | Puerperal. | Measles. |
| ... | ... | ... | ... | ... | 7 | ... | ... | ... | ... | ... |
| ... | 8 | 1 | ... | ... | 4 | ... | ... | 5 | ... | ... |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| ... | 8 | ... | ... | ... | 5 | ... | ... | 3 | ... | ... |
| ... | ... | ... | ... | ... | 2 | ... | ... | .. | ... | ... |
| 1 | 6 | 1 | ... | ... | 6 | ... | ... | 2 | ... | .. |
| ... | 1 | ... | ... | ... | 10 | ... | ... | ... | ... | 20 |
| ... | 12 | ... | ... | ... | 15 | ... | ... | 4 | ... | 23 |
| ... | ... | ... | ... | ... | 10 | ... | ... | ... | ... | ... |
| ... | 10 | 2 | ... | ... | 11 | ... | ... | 3 | ... | ... |
| ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... |
| ... | 3 | ... | ... | ... | 11 | ... | ... | 1 | ... | ... |
| ... | .. | ... | ... | ... | 9 | ... | ... | ... | ... | ... |
| 1 | 2 | 2 | ... | ... | 19 | ... | ... | 1 | ... | ... |
| .. | 1 | ... | ... | ... | 2 | ... | ... | 1 | ... | ... |
| ... | 5 | 2 | ... | ... | 2 | ... | ... | ... | ... | ... |
| ... | 1 | ... | ... | ... | ... | ... | .. | 1 | ... | ... |
| ... | 9 | ... | ... | ... | 5 | ... | ... | 2 | ... | ... |
| ... | ... | ... | ... | ... | 4 | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... | 6 | ... | ... | ... | ... | ... |
| ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... |
| ... | 7 | 1 | ... | ... | 4 | ... | ... | 1 | ... | ... |
| ... | 2 | ... | ... | ... | 1 | ... | ... | 2 | ... | ... |
| ... | 11 | 1 | ... | ... | 3 | ... | ... | 4 | ... | ... |
| ... | 5 | ... | ... | ... | 46 | ... | ... | 4 | ... | 20 |
| 2 | 81 | 10 | ... | ... | 91 | ... | ... | 26 | ... | 23 |
| 2 | 86 | 10 | ... | ... | 137 | .. | ... | 30 | ... | 43 |

# TABLE

Summary of Cases Admitted into Westhulme

| | 1880 | | 1881 | | 1882 | | 1883 | | 1884 | | 1885 | | 1886 | | 1887 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died |
| Smallpox ..... | 5 | ... | 39 | 9 | 18 | 2 | 6 | ... | 2 | ... | 5 | ... | 5 | ... | 3 | ... |
| Measles . ..... | 2 | .. | ... | ... | 2 | ... | 1 | ... | 5 | . | ... | ... | .. | ... | 1 | 1 |
| Scarlet Fever... | 73 | 12 | 60 | 15 | 30 | 2 | 91 | 3 | 111 | 10 | 90 | 8 | 205 | 10 | 571 | 27 |
| Diphtheria ... | ... | ... | 2 | 1 | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... |
| Typhus .. ... . | ... | .. | 1 | 1 | . | . | ... | ... | 1 | ... | ... | ... | 12 | 4 | 2 | 1 |
| Typhoid Fever. | 28 | 5 | 56 | 8 | 29 | 4 | 32 | 7 | 36 | 4 | 31 | 7 | 52 | 8 | 40 | 6 |
| Simple Continued Fever . | 2 | ... | 4 | 1 | 2 | ... | ... | .. | .. | ... | 1 | . | 1 | ... | . . | .. |
| Puerperal Fever | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | 1 | 1 |
| Erysipelas ... | ... | ... | ... | ... | ... | ... | 5 | 1 | 4 | 2 | 1 | ... | 2 | 1 | 1 | ... |
| Ill-defined ..... | ... | | ... | ... | .. | ... | ... | ... | 6 | ... | 4 | 3 | ... | ... | ... | ... |
| | 110 | 17 | 162 | 35 | 81 | 8 | 135 | 11 | 165 | 16 | 132 | 18 | 277 | 23 | 619 | 36 |

## No. 22.

Hospital During the Years 1880 to 1897.

| 1888 | | 1889 | | 1890 | | 1891 | | 1892 | | 1893 | | 1894 | | 1895 | | 1896 | | 1897 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died | Admitted | Died |
| 123 | 16 | 1 | ... | ... | ... | ... | ... | 136 | 16 | 638 | 63 | 28 | 1 | 8 | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | 3 | ... | ... | .. | 1 | ... | ... | ... | ... | ... | 18 | 5 | 12 | 3 | 43 | 3 |
| 203 | 8 | 222 | 13 | 134 | 7 | 81 | 4 | 246 | 15 | ... | ... | 20 | 2 | 67 | 5 | 371 | 18 | 140 | 8 |
| ... | ... | ... | ... | ... | ... | ... | .. | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| ... | ... | .. | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 8 | 2 | ... | ... |
| 23 | 7 | 12 | 5 | 28 | 5 | 46 | 10 | 12 | 2 | ... | .. | 15 | 3 | 41 | 10 | 27 | 5 | 31 | 6 |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | .. | ... | ... | ... | ... | ... | ... |
| 1 | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... |
| 4 | ... | 1 | .. | ... | ... | 1 | ... | ... | ... | ... | . | ... | ... | ... | ... | ... | ... | ... | ... |
| 354 | 31 | 236 | 18 | 166 | 12 | 128 | 14 | 397 | 33 | 638 | 63 | 63 | 6 | 134 | 20 | 418 | 28 | 214 | 17 |

# TABLE No. 23.

Showing the number of new Cases of Sickness coming to the knowledge of the Medical Officer of Health during the years 1881 to 1897.

| Year. | Small-pox. | Scarlet Fever. | Diph-theria. | Typhus Fever. | Typhoid Fever. | Puer-peral Fever. | Total Cases. |
|---|---|---|---|---|---|---|---|
| 1881 | 15 | 434 | 20 | ... | 131 | 3 | 603 |
| 1882 | 13 | 465 | 27 | ... | 117 | 3 | 625 |
| 1883 | 6 | 301 | 15 | ... | 96 | 3 | 421 |
| 1884 | 2 | 289 | 20 | 1 | 100 | ... | 412 |
| 1885 | 4 | 229 | 28 | ... | 58 | 2 | 321 |
| 1886 | 5 | 391 | 44 | 12 | 100 | 7 | 559 |
| 1887 | 3 | 1,775 | 127 | 2 | 119 | 5 | 2,031 |
| 1888 | 104 | 985 | 86 | ... | 106 | 3 | 1,284 |
| 1889 | 1 | 680 | 39 | ... | 56 | 5 | 781 |
| 1890 | ... | 320 | 11 | 2 | 63 | 7 | 403 |
| 1891 | ... | 238 | 29 | ... | 112 | 4 | 383 |
| 1892 | 75 | 667 | 27 | ... | 83 | 9 | 861 |
| 1893 | 416 | 442 | 25 | ... | 70 | 9 | 962 |
| 1894 | 165 | 264 | 67 | ... | 69 | 9 | 574 |
| 1895 | 137 | 216 | 70 | ... | 109 | 5 | 537 |
| 1896 | 27 | 785 | 61 | 8 | 114 | 17 | 1,012 |
| 1897 | ... | 332 | 38 | 2 | 86 | 10 | 468 |

# TABLE No. 24.

Summary of Smallpox Cases treated in the various Hospitals during the years 1894 to 1897.

| Hospitals. | 1894. | | 1895. | | 1896. | | 1897. | |
|---|---|---|---|---|---|---|---|---|
| | Admitted. | Died. | Admitted. | Died. | Admitted. | Died. | Admitted. | Died. |
| Moscow ..... ..... | 81 | 9 | 94 | 14 | 8 | ... | ... | ... |
| Cinder Hill ..... | 52 | 8 | 30 | 8 | ... | ... | ... | ... |
| Strinesdale ..... | ... | ... | ... | ... | 19 | ... | ... | ... |
| Totals ..... | 133 | 17 | 124 | 22 | 27 | ... | ... | ... |

PART III.

# Work of the Health Department,

1897.

## STAFF.

The staff of the Health Department consists of, at the present time, the Chief Inspector, five Assistant Inspectors, a Smoke Inspector, a Workshop Inspector, two Disinfectors and four Clerks.

The Committee, acting on the suggestion in last year's Report, decided to appoint an additional Inspector for Workshops alone, and I am glad to say he is already doing very useful work.

## HOUSE TO HOUSE INSPECTION.

Eleven hundred and twenty-six houses have been inspected during the year in the thorough and systematic manner implied by the term "House to House Inspection," with the result shown in Table No. 25. This compares very favourably with last year, when the number was 794.

In addition to the above, 505 houses have been inspected on complaint, and 1,190 houses as the result of the occurrence of infectious diseases, so that in all 2,821

houses have been thoroughly inspected, as compared with 2,273 last year. The smoke test has been applied to the drains of 608 houses, and in no less than 240 instances drainage defects generally of a serious character have been discovered and remedied.

Full particulars as to the nature of nuisances dealt with, and of the work done by the department, will be found in the tables appended.

## INSANITARY PROPERTY.

During the year the Insanitary Dwellings Sub-Committee have visited 113 dwellings reported by the Medical Officer of Health, in addition to visiting a number of insanitary courts, yards, back passages, blocks of privies, &c.

Of these houses 61 were ordered to be closed as unfit for human habitation, unless alterations were effected to make the dwellings fit for habitation.

The dwelling houses closed are as follows :—

| | |
|---|---|
| 1, 3, 12 and 14, ... ... ... | Rowbottom Court. |
| 18, ... ... ... ... ... | Hanover Street. |
| 1, ... ... ... ... ... | Pollitt Street. |
| 2 and 4, ... ... ... ... | Sack Street. |
| 2, Court 1, ... ... ... ... | Brunswick Street. |
| 4 and 6, ... ... ... ... | Whitehead Square. |
| 171 and 173, ... ... ... ... | Shaw Road. |
| 5 and 7, Court 1, ... ... ... | Ironmonger Street. |
| 11, ... ... ... ... ... | Old Church Street. |
| 2 and 4, Court 1, ... ... ... | Priory Street. |
| 2, Court 6, ... ... ... ... | Peter Street. |

| | |
|---|---|
| 1, 3 and 5, Court 5, ... ... ... | Peter Street. |
| 1, 3, 5, 6 and 7, Court 2, ... ... | Priory Street. |
| 3, ... ... ... ... ... | Ironmonger Street. |
| 155, 157, 159 and 161, ... ... | Henshaw Street. |
| 37, 39 and 41, ... ... ... | Bow Street. |
| House in Passage off ... ... ... | Bow Street. |
| 1, 3, 5 and 7, ... ... ... ... | Back Bow Street. |
| 7, 9, 11, 13, 15, 17, 19, 21 and 23, ... | Bread Street. |
| 8, 10 and 12, ... ... ... ... | Bread Street. |
| 10, 12, 14, 16, 18, 20, 22, 24 and 26, ... | Jones Street. |

In addition to the houses dealt with by the Insanitary Dwellings Sub-Committee, 13 insanitary dwellings have been voluntarily closed chiefly through the representation of this department, so that the total number of insanitary dwellings closed during the year is brought up to 74.

## DAIRIES AND MILKSHOPS.

The number of dairies on the register in 1897 was 256 (Table No. 26), which is a decrease of five on 1896. During the year 957 visits were paid by the Inspectors to dairies and milkshops, and it was found necessary to serve 11 notices for limewashing, &c.

There have been no outbreaks of Infectious diseases in ccnnection with the milk supply, and, speaking generally, the milk is handled in a careful and cleanly manner by the dairy men.

There are no cow sheds in the town proper, such as are so often found in large towns; the few cow sheds there are in the Borough being situated on farms away from the main centres of the population.

## COMMON LODGING HOUSES.

These are under the control of the Watch Committee, and the Chief Constable, in his report, gives the following particulars :—

| | |
|---|---|
| Number of registered lodging houses... | 14 |
| Total accommmodation at night ... ... | 1,151 |
| Total number of persons who slept in them during the year ... ... ... | 279,417 |

There were no cases of Infectious diseases reported from these lodging houses.

## SLAUGHTER HOUSES.

I have inspected the whole of the slaughter houses in the Borough, and found them, with very few exceptions, kept in a clean and fairly satisfactory condition ; but many of them are very unsuitable buildings both in regard to construction and position, and an effort has been made, with a certain amount of success, to improve these unsatisfactory places.

The Committee visited a number of the worst cases, and decided to close certain slaughter houses, but, owing to some informality, this matter will have to stand over until next year.

There were 62 licenses issued, which is the same as the previous year.

From Table No. 27, it will be seen that there have been 4,141 visits paid by the Inspectors to slaughter houses during the year, as compared with 4,118 in 1896 and 3,487 in 1895. It was found necessary to serve notices to cleanse, repair, &c., in 36 cases, and these notices have been complied with.

## OFFENSIVE TRADES.

There are 14 tripe boiling places, 9 marine stores, 6 grease and soap works, and 3 fellmongers places on the register. They have been visited 914 times during the year, and it was found necessary to serve 12 notices for the abatement of various nuisances and for cleansing, which were complied with. They are carried on satisfactorily, and very few complaints are received about them.

## BAKEHOUSES.

There are 71 in the town, but, with the exception of about four, they are on a small scale, and are generally in a clean and satisfactory condition.

Some in connection with confectioners' shops are situated in the cellars, but these are kept scrupulously clean. The large machine bakehouses are well managed, clean, and in suitable buildings.

There have been 460 visits paid to bakehouses during the year, and 14 notices had to be served for cleansing, repairs, &c.

## SMOKE NUISANCES.

In Table No. 28 full particulars are given of the smoke observations for the year. The observations are half-an-hour in duration, and four minutes black smoke in the half-hour is allowed before proceedings are taken.

It will be remembered that in 1895 the Committee altered the length of the observations from an hour to half-an-hour, and the limit of black smoke allowed from nine minutes in the hour to four minutes in the half-hour.

It is very interesting to notice that whereas in the old arrangement almost 11 per cent. of the observations exceeded the limit allowed, in the new one, which is more unfavourable to the offenders, the percentage of offences only reaches 3·6 per cent., and I feel sure that if the limit were cut down still further the mill owners would prove themselves quite capable of meeting the requirements of the Corporation.

In Table No. 29 full details are given of the various smoke appliances in use in the town.

## THE SALE OF FOOD AND DRUGS.

In Table No. 31 there will be found a detailed statement of the work which has been done with a view to prevent the adulteration of food and drugs, from the year 1876 to the present time.

There were 169 samples purchased during the year, of which 3·0 per cent. were found to be adulterated. Those samples consist of :—

150 samples of milk, of which 3 were adulterated.

8 samples of butter, of which 2 were adulterated.

7 samples of other groceries, all of which were genuine.

Prosecutions were instituted in three cases for milk adulteration, one of which was fined 20 shillings and costs, one 10 shillings and costs, and one dismissed. In the case of the two samples of butter, which contained excess water, the sellers were cautioned.

## FACTORY AND WORKSHOPS ACT.

In Table No. 32 there will be found the details of the work done under this Act during the year. Inspections have been regularly carried out, with satisfactory results so far as they go.

As previously stated in this report, a Workshops Inspector has been appointed, with satisfactory results.

---

## REPORT OF CHIEF INSPECTOR FOR 1897,

### *Re* CATTLE, MEAT, AND OTHER INSPECTIONS.

---

*To the Medical Officer of Health.*

SIR,

In presenting this report for your consideration—of occurrences which have transpired during the past year regarding complaints dealt with and events found in the course of inspections and visits to the railway sidings (*re* arrivals of cattle, &c., coming into the town), farms and shippon premises, slaughter houses, and other places—I have to say that some of these experiences have been of a varied and novel character.

First on the list may be cited the slaughtering and dressing of some two or three horses, which had been very secretly killed on disused mill premises in New Radcliffe Street, by the proprietor of a wild beast menagerie which occasionally visits the town.

On this being reported to the Sanitary Committee, and referred to the Town Clerk with a view to proceedings being taken, it was considered futile to proceed against the

offender, seeing that the carcases were not dressed for the purposes of sale.

Knowledge of these events did not come to hand until a great nuisance had been discovered by the offal being hidden away in the manure heap, weighing some $2\frac{1}{2}$ cwt., which I had removed for destruction.

The proprietor was seen and cautioned, and promised that such a proceeding should not occur again.

A second item of interest may be mentioned in regard to a transaction between a wholesale and a retail butcher, where a quantity of offensively smelling meat had been delivered, and would not be taken back under any conditions, resulting in the retail dealer having the meat inspected and condemned by a Magistrate as unfit for consumption, and being eventually sued in the County Court and defending his action with success.

This and the parallel instances of depositing unsound and overkept meat in the public market, and also the important question of the fitness of carcases of animals for human food, found dead under various conditions and not dressed in the ordinary way by duly bleeding, are points which I think have been successfully and beneficially vindicated in the interests of the public health by appeals to the courts.

Again showing the risks and uncertainties of the meat trade in supplying what the public should have—healthy and sound food free from disease—I would refer to the case, which I reported to the Sanitary Committee, of a dairy cow bought by a butcher for £7 10s. 0d., which was found to be very badly affected with tuberculosis, and was surrendered and destroyed.

Perhaps, in the near future, we may yet see the Board of Agriculture scheduling tuberculosis as one of the contagious diseases where compensation will be given to the owners of such cattle.

When we consider that these diseased animals are regularly yielding their daily produce—milk—for human consumption until they are completely worn down, is it to wondered at why tubercular and other allied diseases are so rife in infantile or adult life ?

I consider the evils and dangers incident from this class of cattle far wider reaching and more deleterious—that is, in the consumption of the milk and the eating of the flesh—than can possibly occur in pleuro-pneumonia and some other diseases where cattle show more decided symptoms of illness and of shorter duration. For this and other reasons, it seems to me that the public health stands endangered until the same precautions are enforced regarding tuberculous cattle which are in operation for other contagious diseases.

In regard to the regulations prohibiting the slaughtering and dressing of cattle on farms and unlicensed premises, I am thoroughly satisfied that it has greatly reduced that trafficking in dead carcases between the unprincipled individual known as the slink butcher and the equally self-interested farmer, each trying to outdo the other in driving a bargain.

From personal observations and information given me at the knacker's yards, I can vouch for it that an enormous increase has resulted in the receipt of carcases for some time back at these establishments.

I can testify to six being sent them during the past year. It has been impossible to ascertain whether others which I have frequently seen passing through the town have come from within or beyond the borough.

The number of investigations regarding complaints as to carcases of one kind and another has been about 50.

The amount of meat destroyed, not reckoning the carcases sent direct to the knackers, has been over 6,600 lbs., including one whole carcase of cow and other portions of beasts, 26 pigs, 5 calves, 3 sheep, 3 rabbits, and a cask of pigs' stomachs.

One measled pig, and also one tuberculous pig found in the course of slaughtering, have been surrendered and destroyed.

Rabies.—In only one instance has it been deemed necessary to have a post mortem made in regard to suspected rabies in a dog, where the Veterinary Surgeon failed to find any trace of disease, and was of opinion that the animal had partaken of poisoned food.

Swine Fever.—Three separate suspected outbreaks have been inquired into, but in only one instance were the officials of the Board of Agriculture satisfied as to the correctness of the diagnosis.

Swine Fever Areas.—No relaxation has as yet been made in regard to pigs coming from Ireland into Oldham for pig dealers' purposes, and declarations and licenses have still to be obtained before they can be moved into the adjoining county divisions of Lancashire. For such movements I have issued 578 licenses for 4,017 pigs during the past year.

As a final summary on these matters regarding the meat and other food stuffs supplied to the public, I venture to think that whatever may be seen exposed for sale in our markets and at the various shops about the town will bear the merit of favourable comparison with any similar centre like Oldham.

Seeing that these remarks have extended beyond my anticipations, I will bring them to a conclusion by observing that in the tables showing the results of the year's work done by the staff of Inspectors I think it will be recognised that no relaxation of energy or effort has been wanting in trying to carry out the wishes of the Sanitary Committee for the closing of houses considered as unfit for habitation, the remedying of insanitary conditions by substantial improvements in regard to reconstructions of house drainage, speedy removals of offensive accumulations and nuisances in the immediate neighbourhood of dwellings, and unremitting attention given wherever recurring nuisances are so apt to occur most frequently.

I remain,

Your obedient Servant,

THOMAS RUSHWORTH,

Chief Sanitary Inspector.

# TABLE No. 25.

## HOUSE TO HOUSE INSPECTION.

Total Houses Inspected, 1,126.

| | |
|---|---|
| Houses without Back Doors ... ... ... | 410 |
| ,, with Defective or Stone Drainage ... | 236 |
| ,, ,, Slopstone Pipes connected ... | 35 |
| ,, ,, Defective Ventilation ... ... | 223 |
| ,, ,, Defective Cellars ... ... | 75 |
| ,, Dirty ... ... ... ... ... | 151 |
| ,, Suspected of Over-crowding ... ... | 57 |
| ,, Damp ... ... ... ... ... | 153 |
| ,, near Manure Heaps ... ... ... | 112 |
| ,, ,, Slaughter Houses ... ... | 36 |

# TABLE No. 26.

## DAIRIES AND MILK SHOPS.

| District. | No. on Register 1896. | No. Discontinued, 1897. | No. Registered, 1897. | No. on Register, 1897. | Notices served. | Cases of Sickness. | | | | No. removed to Hospital. | Treated at Home. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Smallpox | Scarlet Fever | Typhoid Fever | Diphtheria | | |
| No. 1 | 83 | 12 | 16 | 87 | 3 | ... | ... | ... | ... | ... | ... |
| ,, 2 | 54 | 25 | 12 | 41 | 2 | ... | ... | ... | ... | ... | ... |
| ,, 3 | 62 | 16 | 15 | 61 | 3 | ... | ... | ... | ... | ... | ... |
| ,, 4 | 35 | ... | 3 | 38 | 3 | ... | ... | ... | ... | ... | ... |
| ,, 5 | 27 | 6 | 8 | 29 | ... | ... | ... | ... | ... | ... | ... |
| Totals | 261 | 59 | 54 | 256 | 11 | ... | ... | ... | ... | ... | ... |

# TABLE No. 27.

Showing the number of Smoke Observations taken and Inspections of Mill Lodges and Slaughter-Houses made during the years 1896-97.

| Fortnight ending | | Smoke Observations. | | Mill Lodges Inspections. | | Slaughter-Houses Inspections. | |
|---|---|---|---|---|---|---|---|
| 1896. | 1897. | 1896. | 1897. | 1896. | 1897. | 1896. | 1897. |
| Jan. 11 | Jan. 9... | 43 | 27 | 157 | 96 | 145 | 164 |
| ,, 25 | ,, 23... | 29 | 28 | 158 | 101 | 150 | 169 |
| Feb. 8 | Feb. 6... | 44 | 17 | 166 | 106 | 152 | 179 |
| ,, 22 | ,, 20... | 64 | 49 | 167 | 126 | 132 | 191 |
| Mar. 7 | Mar. 6... | 46 | 59 | 129 | 89 | 231 | 190 |
| ,, 21 | ,, 20... | 69 | 46 | 102 | 224 | 139 | 177 |
| Apr. 4 | Apr. 3... | 57 | 57 | 156 | 80 | 134 | 172 |
| ,, 18 | ,, 17... | 52 | 59 | 119 | 40 | 131 | 147 |
| May 2 | May 1... | 74 | 55 | 146 | 221 | 168 | 168 |
| ,, 16 | ,, 15 .. | 56 | 60 | 106 | 66 | 142 | 187 |
| ,, 30 | ,, 29... | 52 | 65 | 167 | 212 | 174 | 221 |
| June 13 | June 12... | 58 | 50 | 111 | 73 | 115 | 146 |
| ,, 27 | ,, 26... | 55 | 49 | 164 | 184 | 130 | 98 |
| July 11 | July 10... | 79 | 65 | 118 | 43 | 153 | 86 |
| ,, 25 | ,, 24... | 75 | 90 | 145 | 206 | 149 | 121 |
| Aug. 8 | Aug. 7... | 65 | 79 | 114 | 84 | 178 | 187 |
| ,, 22 | ,, 21... | 51 | 52 | 176 | 97 | 177 | 151 |
| Sep. 5 | Sep. 4... | 24 | ... | 77 | ... | 96 | ... |
| ,, 19 | ,, 18... | 30 | ... | 121 | ... | 136 | ... |
| Oct. 3 | Oct. 2... | 63 | ... | 115 | 378 | 115 | 324 |
| ,, 17 | ,, 16... | 61 | ... | 116 | 184 | 198 | 161 |
| ,, 31 | ,, 30... | 35 | ... | 141 | 97 | 196 | 159 |
| Nov. 14 | Nov. 13... | 32 | ... | 68 | 185 | 211 | 154 |
| ,, 28 | ,, 27... | 41 | ... | 213 | 57 | 188 | 164 |
| Dec. 12 | Dec. 11... | 27 | 39 | 118 | 197 | 163 | 171 |
| ,, 26 | ,, 30... | 15 | 60 | 143 | 328 | 215 | 254 |
| | | 1297 | 1006 | 3513 | 3474 | 4118 | 4141 |

# TABLE No. 28.

HALF-HOURLY SMOKE OBSERVATIONS, taken from December 26th, 1896, to December 24th, 1897.

| Total Observations taken. | No Black Smoke. | Under 1 Minute. | Under 2 Minutes. | Under 3 Minutes. | 3 and 4, both inclusive. | Over 4 Minutes. |
|---|---|---|---|---|---|---|
| 1006 | 93 | 172 | 307 | 246 | 152 | 36 |
| Percentage ... | 9·24 | 17·10 | 30·51 | 24·45 | 15·10 | 3·57 |

# TABLE No. 29.

## Nature of Smoke Appliances in Use in the Borough of Oldham, 1897.

| Name of Appliances. | No. of Mills. | No. of Boilers. |
|---|---|---|
| Cass's Coking Machines ... ... ... ... | 4 | 15 |
| Dyson & Williamson's Coking Machines... | 1 | 2 |
| Williams' Automatic do. ... | 1 | 1 |
| Bennis's Sprinklers ... ... ... ... ... | 4 | 11 |
| Proctor's do. ... ... ... .. ... | 5 | 12 |
| Leach & Co.'s do. ... ... ... ... ... | 1 | 1 |
| Meldrum Bros.' Forced Draught Furnace | 7 | 11 |
| Newton's do. do. | 1 | 1 |
| Perritt's do. do. | 1 | 2 |
| Granger's do. do. | 1 | 1 |
| Broadbent's Air Regulators ... ... ... | 17 | 49 |
| ‡Whittle's Steam Injectors ... ... ... | 3 | 9 |
| Steam Jets ... ... ... ... ... ... ... | 3 | 7 |
| *Tweedale & Massey's Air Regulators ... | 2 | 6 |
| Caddy's Tubular Bars ... ... ... ... | 9 | 29 |
| Wilson's Moveable Bars ... ... ... ... | 4 | 12 |
| Yates & Thom's Rocking Bars ... ... ... | 6 | 13 |
| Taylor's Patent Bridge Walls ... .... ... | 1 | 3 |
| Holden's Hollow Bars and Dead Plates.. | 1 | 2 |
| Hollow or Split Bridges ... ... ... ... | 7 | 17 |
| Automatic Air Regulators on fire-box doors | 1 | 4 |
| ‡Broadbent's Steam Pokers ... ... ... | 5 | 14 |
| McGreaves' Incandescent Smoke Burner.. | 2 | 2 |
| | 87 | 224 |

‡ Only used at two mills. * Only used at one mill.

Mills where no appliances are fixed—83 Mills ; 187 Boilers.

There are also 65 workshop chimneys not on books.

81 88

# TABLE No. 30.

## SMOKE PROSECUTIONS DURING 1897.

| No. of Firms Fined. | Amount of Fine. | No. of times previously prosecuted. |
|---|---|---|
| 1 | £2 and Costs | 6 |
| 1 | £1 ,, | 11 |
| 1 | £1 ,, | 7 |
| 2 | £1 ,, | 3 |
| 2 | £1 ,, | 2 |
| 1 | 10/- ,, | 10 |
| 1 | 10/- ,, | 4 |
| 2 | 10/- ,, | 3 |
| 1 | 10/- ,, | 2 |
| 3 | 10/- ,, | 1 |
| 1 | 10/- ,, | 0 |
| 1 | 5/- ,, | 11 |
| 1 | 5/- ,, | 3 |
| 2 | 5/- ,, | 1 |
| 2 | 5/- ,, | 0 |
| 1 | 5/-, including Costs | 2 |

# TABLE No. 31.

## Samples Obtained Under the "Sale of Food and Drugs Act."

| Year. | Total. | | Milk. | | Butter. | | Bread and Flour. | | Other Groceries. | | Wines and Spirits. | | Sundries. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. of Samples | Percentage Adulterated | No. of Samples | Percentage Adulterated | No. of Samples. | Percentage Adulterated | No. of Samples. | Percentage Adulterated. | No. of Samples. | Percentage Adulterated. | No. of Samples. | Percentage Adulterated. | No. of Samples. | Percentage Adulterated. |
| 1876 | 74 | 27·0 | 38 | 42·1 | 7 | ... | 6 | ... | 23 | 17·4 | ... | ... | ... | ... |
| 1877 | 81 | 23·4 | 34 | 26·5 | ... | ... | 21 | ... | ... | ... | 20 | 50·0 | 6 | ... |
| 1878 | 74 | 25·7 | 55 | 21·8 | ... | ... | | ... | 12 | 8·3 | 6 | 100·0 | 1 | ... |
| 1879 | 77 | 14·3 | 54 | 20·4 | ... | ... | 12 | ... | 6 | ... | 3 | ... | 2 | ... |
| 1880 | 87 | 21·8 | 43 | 27·9 | 8 | 12·5 | 8 | ... | 22 | 18·2 | 6 | 33·3 | ... | ... |
| 1881 | 100 | 10·0 | 67 | 10·4 | 13 | ... | ... | ... | 10 | 10·0 | 7 | 28·6 | 3 | ... |
| 1882 | 100 | 19·0 | 44 | 22·7 | 15 | 33·3 | 4 | ... | 17 | ... | 13 | 30·8 | 7 | ... |
| 1883 | 101 | 12·9 | 43 | 16·3 | 8 | 37·5 | 2 | ... | 20 | ... | 18 | 16·6 | 10 | ... |
| 1884 | 85 | 8·2 | 47 | 2·1 | 11 | 18·2 | ... | ... | 8 | 37·5 | 8 | 12·5 | 11 | ... |
| 1885 | 63 | 15·9 | 43 | 18·6 | 17 | 11·7 | ... | ... | 3 | .. | ... | ... | ... | ... |
| 1886 | 62 | 9·7 | 40 | 5·0 | 9 | 1·1 | . | ... | 13 | 23·1 | .. | ... | ... | ... |
| 1887 | 75 | 8·0 | 57 | 8·8 | 4 | ... | 4 | ... | 6 | 16·6 | 4 | ... | ... | ... |
| 1888 | 90 | 8·9 | 70 | 8·6 | 4 | 25·0 | ... | ... | 4 | 25·0 | 8 | ... | 4 | ... |
| 1889 | 98 | 6·1 | 80 | 6·2 | 5 | 20·0 | ... | ... | 4 | ... | 6 | ... | 3 | ... |
| 1890 | 98 | 6·1 | 75 | 6·6 | 7 | ... | ... | ... | 6 | 16·6 | 4 | ... | 6 | ... |
| 1891 | 119 | 5·9 | 75 | 4·0 | 13 | 23·1 | ... | .. | 27 | ... | 4 | 25·0 | ... | ... |
| 1892 | 90 | 1·1 | 68 | 1·5 | 3 | ... | ... | ... | 7 | ... | 4 | ... | 8 | ... |
| 1893 | 106 | 10·4 | 84 | 8·3 | 7 | 42·8 | ... | ... | 6 | ... | 3 | 33·3 | 6 | ... |
| 1894 | 139 | 2·1 | 83 | 3·6 | 18 | ... | 6 | ... | 26 | ... | 3 | . | 3 | ... |
| 1895 | 147 | 6·1 | 120 | 5·0 | 11 | ... | ... | ... | 1 | ... | 6 | ... | 9 | 33·3 |
| 1896 | 154 | 6·5 | 138 | 6·5 | 9 | ... | ... | ... | 1 | ... | 6 | 16·6 | ... | ... |
| 1897 | 169 | 3·0 | 150 | 2·0 | 8 | 25·0 | ... | ... | 7 | ... | ... | ... | 4 | ... |

# TABLE No. 32.

## Showing the Number of Workshops Registered, Visits Made, and Defects Removed.

| | |
|---|---|
| No. of Workshops Registered ... .. ... ... ... | 230 |
| No. of Workshops Reported to Factory Inspectors ... ... | — |
| No. of Visits Paid ... ... ... ... ... ... | 567 |

| Defects Found. | Notices Served. | Notices complied with. |
|---|---|---|
| Defective Drainage ..... | 4 | 4 |
| Defective Ventilation ..... | 1 | 1 |
| Damp ..... ... | 5 | 5 |
| Broken Floors or Walls .. ... | ... | ... |
| Insufficient or no Closet Accommodation... | 2 | 2 |
| Defective Closets ..... | 2 | 2 |
| Defective or no Urinals ..... | .. | ... |
| Dirty Workshops ..... | 17 | 17 |

# TABLE No. 33.

## MAGISTERIAL PROCEEDINGS, 1897.

| No. of Cases. | Particulars of Complaint. | How Disposed of. | Penalties. £ | s. | d. |
|---|---|---|---|---|---|
| 23 | Smoke Nuisance ..... | One fined 40/- and costs; six 20/- and costs; nine 10/- and costs; six 5/- and costs; and one 5/-, including costs ..... | 14 | 0 | 0 |
| 3 | Milk Adulteration ..... | One fined 20/- and costs; one 10/- and costs; and one dismissed ... | 1 | 10 | 0 |
| 2 | Unsound Meat ... ..... | One fined £10 and costs, and one dismissed..... | 10 | 0 | 0 |
| 4 | Occupying property condemned as unfit for human habitation. | Withdrawn, the houses having been vacated ... | ... | ... | ... |
| 1 | Dilapidated Privy..... | Order made to repair within 28 days ..... | ... | ... | ... |
| 1 | Dilapidated Ashpit ..... | Do. ... | ... | ... | ... |
| 1 | Exposing Infected Person. | Fined 1/- and costs ..... | | 1 | 0 |
| | | £ | 25 | 11 | 0 |

# INSPECTORS' REPORTS.

---

| | |
|---|---|
| Total Number of Reports of Nuisances and Notices Served .. ... | 3940 |
| Total Number of Notices complied with on receipt of Notice .. | 2964 |
| Total Number do. do. Order of Committee ... | 442 |
| Number of Complaints Received and Visited ... ... ... ... ... | 1015 |
| Re-Inspection of Nuisances under Notice ... ... ... ... ... | 12785 |
| Number of Cases dealt with by Sanitary Committee in 1897 ... | 511 |
| Number of Cases remaining unabated ... ... ... ... ... ... | 69 |
| Number of Cases dealt with by the Magistrates in 1897 ... ... | 35 |

---

| | |
|---|---|
| House-to-House Inspection ... ... ... ... ... ... ... ... | 1126 |
| Total Number of Houses Inspected on Complaint... ... ... ... | 505 |
| Houses Repaired... ... ... ... ... ... ... ... ... ... ... | 213 |

| | Notices Served. | Notices Complied with. |
|---|---|---|
| Dirty Houses ... ... ... ... ... ... ... ... | 245 | 232 |
| Damp, Defective Roof, &c.... ... ... ... ... ... | 892 | 762 |
| Defective Ventilation ... ... ... ... ... ... | 129 | 135 |
| Defective Cellars ... ... ... ... ... ... ... ... | 149 | 120 |
| Privy Nuisances ... ... ... ... ... ... ... .. | 1348 | 1248 |
| Ashpits . ... ... ... ... ... ... ... ... ... | 135 | 103 |
| Defective Water Supply ... ... ... ... ... ... | 123 | 119 |
| Overcrowding ... ... ... ... ... ... ... ... | 15 | 13 |
| Unfit for Habitation ... ... ... ... ... ... ... | 20 | 16 |

## DRAINAGE DEFECTS.

| | Notices Served. | Notices Complied with. |
|---|---|---|
| Blocked Drains ... ... ... ... ... ... ... .. | 610 | 597 |
| Defective Drains... ... ... ... ... ... ... ... | 819 | 637 |
| Gully Traps improperly laid ... ... ... ... ... | 10 | 18 |
| Drain inlets untrapped or defectively trapped... ... | 698 | 896 |
| Waste Pipes and Sloppipes directly connected with drain ... ... ... ... ... ... ... ... ... | 160 | 135 |
| Waste Pipes improperly trapped ... ... ... .. | 27 | 17 |
| Slop Pipe, defective or improperly ventilated... .. | 305 | 278 |
| Defective Water Closets ... ... ... .. ... ... | 62 | 48 |
| New Water Closets Provided ... .. ... ... .. | 18 | 32 |

No. of Smoke or other Tests, 278. No. of Houses Tested, 608. No. of Defects found, 240. 4394 yards of Channel Tiles and Drainage Pipes have been laid or re-laid during the year. Traps fixed, 896. Ventilating Grids, 63. Houses connected with Main Sewer, 123.

| | Visits Paid. | Notices Served. | Notices Complied with. |
|---|---|---|---|
| Bakehouses ... ... ... ... ... ... ... | 460 | 14 | 13 |
| Dairies and Cowsheds ... ... ... ... | 957 | 11 | 9 |
| Farms ... ... ... ... ... ... ... ... | 239 | 9 | 5 |
| Pigsties... ... ... ... ... ... ... ... | 1790 | 18 | 11 |
| Slaughter Houses ... ... ... ... .. | 4141 | 36 | 25 |
| Offensive Trades ... ... ... ... ... ... | 914 | 12 | 11 |
| Mill Lodges ... ... ... ... ... ... ... | 3474 | 18 | 12 |
| Factories and Workshops ... ... ... ... | 567 | 28 | 31 |

* The disparity between Notices served and complied with is accounted for by one Notice in some cases including work done at more than one house.

| | |
|---|---|
| Inspection under Contagious Diseases (Animals) Act ... ... ... | 11 |
| Animals destroyed ... ... ... ... ... ... ... ... ... ... | 31 |
| Unsound Food: Meat, Fish, Fruit, &c., destroyed... ... ...Lbs. | 4898 |
| Samples taken under Food and Drugs Act ... ... ... ... ... | 169 |
| Letters written to Property Owners or Agents, &c. ... ... ... | 26 |
| Miscellaneous Visits, &c ... ... ... ... ... ... ... ... ... | 1652 |
| Privies inspected ... ... ... ... ... ... ... ... ... ... ... | 6861 |
| New Privies built... ... ... ... ... ... ... ... ... ... ... | 63 |
| Ashpits built, or new Ashcans provided ... ... ... ... ... ... | 53 |

---

| | |
|---|---|
| Yards and Passages Repaired and Flagged ... ... ... ... ... | 153 |
| Erections in Yards reported ... ... ... ... ... ... ... ... | 13 |
| Defective Urinals... ... ... ... ... ... ... ... ... ... ... | 36 |
| Accumulation of Offensive Matter ... ... ... ... ... ... ... | 298 |
| Carcases of Animals in Water ... ... ... ... ... ... ... ... | 65 |
| Stagnant Water ... ... ... ... ... ... ... ... ... ... ... | 50 |
| Manure Heaps ... ... ... ... ... ... ... ... ... ... ... | 70 |
| Manure Pits built ... ... ... ... ... ... ... ... ... ... | 3 |
| Poultry in Houses ... ... ... ... ... ... ... ... ... ... | 51 |
| Dust and Fly from Mills ... ... ... ... ... ... ... ... ... | — |
| Low or Defective Chimneys ... ... ... ... ... ... ... ... | 24 |
| Dangerous Places reported... ... ... ... ... ... ... ... ... | 75 |
| Coal Gas Nuisances and Escapes reported ... ... ... .. ... | 7 |
| Dead Bodies removed to Mortuary ... ... ... ... ... ... ... | 15 |

---

| | |
|---|---|
| Visits to Cases of Infectious Diseases ... ... ... ... ... ... | 1190 |
| Visits to Cases of Phthisis .. ... ... ... ... ... ... ... ... | 185 |
| Visits to Deaths under 1 year of age... ... ... ... ... ... ... | 679 |
| Cases removed to Hospital... ... ... ... ... ... ... ... ... | 214 |
| Houses Stripped or Cleansed after Infectious Disease ... ... ... | 3 |

---

## HOUSES AND CLOTHING DISINFECTED.

| | |
|---|---|
| Number of Houses Disinfected during the year 1897 ... ... ... | 580 |
| Number of Rooms do. do. do. ... ... ... | 1472 |
| Number of lots of Clothing Disinfected during the year 1897 ... | 612 |
| Number of Articles do. do. do. ... ... | 5953 |
| Number of Articles destroyed do. do. do. ... ... | 191 |

## CLOTHING, &c., 1896-1897.

| Articles. | Disinfected. | | Destroyed. | | Totals. | |
|---|---|---|---|---|---|---|
| | 1896. | 1897. | 1896. | 1897. | 1896. | 1897. |
| Blankets ..... | 1392 | 688 | 4 | ... | 1396 | 688 |
| Sheets ..... | 1054 | 445 | 3 | ... | 1057 | 445 |
| Pillows ..... ... | 1538 | 968 | 18 | 13 | 1556 | 981 |
| Bolsters ..... | 884 | 491 | 7 | 1 | 891 | 492 |
| Quilts..... | 1140 | 669 | 2 | ... | 1142 | 669 |
| Mattresses ..... | 49 | 20 | 44 | 97 | 93 | 117 |
| Beds ..... | 1018 | 650 | 100 | 52 | 1118 | 702 |
| Carpets ..... | 200 | 49 | 1 | 2 | 201 | 51 |
| Rugs ..... ..... | 244 | 43 | 3 | ... | 247 | 43 |
| Curtains..... | 113 | 14 | ... | . . | 113 | 14 |
| Clothes ..... | 4612 | 1693 | 144 | 25 | 4756 | 1718 |
| Sundry Articles ... | 832 | 223 | 18 | 1 | 850 | 224 |
| | 13076 | 5953 | 344 | 191 | 13420 | 6144 |

## INFECTIOUS CASES, 1896-1897.

(Cases and Visits).

| | 1896. | 1897. |
|---|---|---|
| Number of Cases ... ... ... ... ... | 1012 | ... 468 |
| Number of Visits ... ... ... ... ... | 1996 | ... 1190 |
| Number of Visits to Cases of Phthisis ... ... | 164 | ... 185 |

# NIGHTSOIL AND ASHES DEPARTMENTS, 1897.

| | | |
|---|---|---|
| Number of | Sanitary Pans in the Borough ... ... ... ... ... | 23885 |
| Do. | Iron Tanks, Cesspools, &c., in the Borough ... ... | 42 |
| Do. | Water Closets do. ... ... | 1536 |
| Do. | Waste-water Closets do. ... ... | 793 |
| Do. | Trough Closets do. ... ... | 206 |
| Do. | Ashpits do. ... ... | 10443 |
| Do. | Places with Ash Cans, &c., do. ... ... | 1455 |
| Do. | Houses represented ... ... ... ... ... ... ... | 31483 |
| Do. | Mills, Workshops, &c., represented ... ... ... ... | 537 |
| Do. | Churches, Schools, &c., represented ... ... ... ... | 193 |

## NIGHTSOIL DEPARTMENT.

| | | |
|---|---|---|
| Number of | Sanitary Pans Emptied during the night ... ... ... | 1252280 |
| Do. | Cesspools do. do. ... ... ... | 115 |
| Do. | Slaughter-Houses from which Butchers' Offal has been removed during the night... ... ... ... | 4790 |
| Do. | Fish Shops, &c., from which Fish Offal has been removed during the day ... ... ... ... ... | 13719 |
| Do. | Loads of Excreta collected ... ... ... ... ... ... | 13436 |
| Do. | do. Butchers' Offal collected ... ... ... ... | 662 |
| Do. | do. Fish Offal collected ... ... ... ... ... | 681 |
| Do. | do. Shoddy Dirt collected ... ... ... ... ... | 5871 |
| Do. | Tons of Manure sent out from Higginshaw ... ... | 15833 |
| Do. | do. do. Bower Clough ... ... | 7128 |
| Total Number of | Tons sent out ... ... ... ... ... ... ... | 22961 |

## ASHES DEPARTMENT.

| | | |
|---|---|---|
| Number of | Ashpits Emptied during the day ... ... ... ... | 58052 |
| Do. | Other Places collected during the day ... ... ... | 69887 |
| Do. | Loads of Ashes taken to Destructor ... ... ... ... | 16212 |
| Do. | do. do. Corporation Tips ... ... | 13246 |
| Do. | do. do. elsewhere ... ... ... ... | 6936 |
| Do. | do. Clinkers removed ... ... ... ... ... ... | 5232 |
| Total No. of | Loads removed ... ... ... ... ... ... ... ... | 41626 |

## DESTRUCTOR.

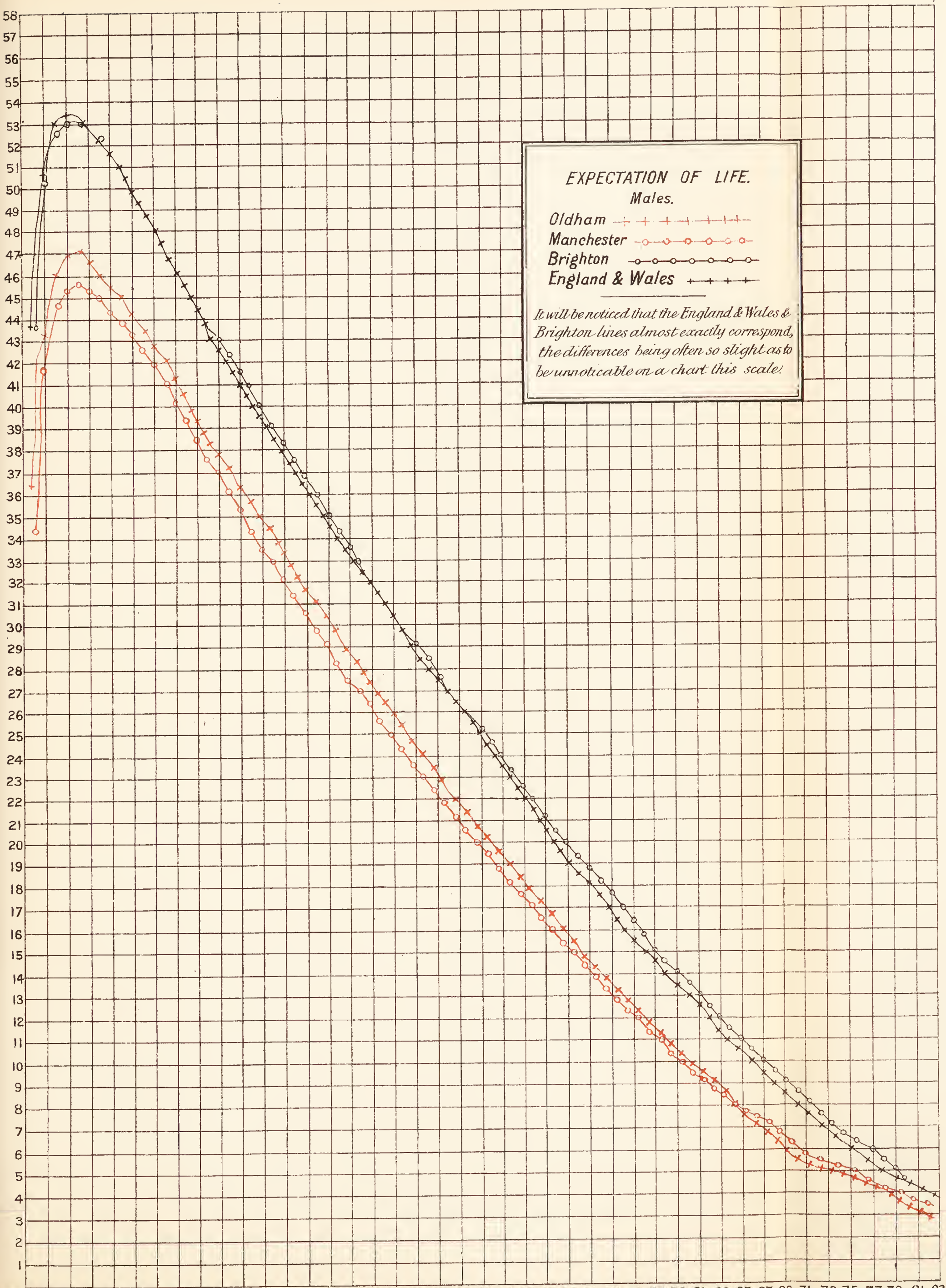
| | Tons | Cwt. |
|---|---|---|
| Quantity of Ashes, Fish Offal and Garbage consumed at the Destructor ... ... ... ... ... ... ... | 18699 | 7 |
| Average per Furnace per day of 24 hours ... ... ... ... | 8 | 2 |
| Quantity of Mortar Sold... ... ... ... ... ... ... ... | 1155 | 0 |

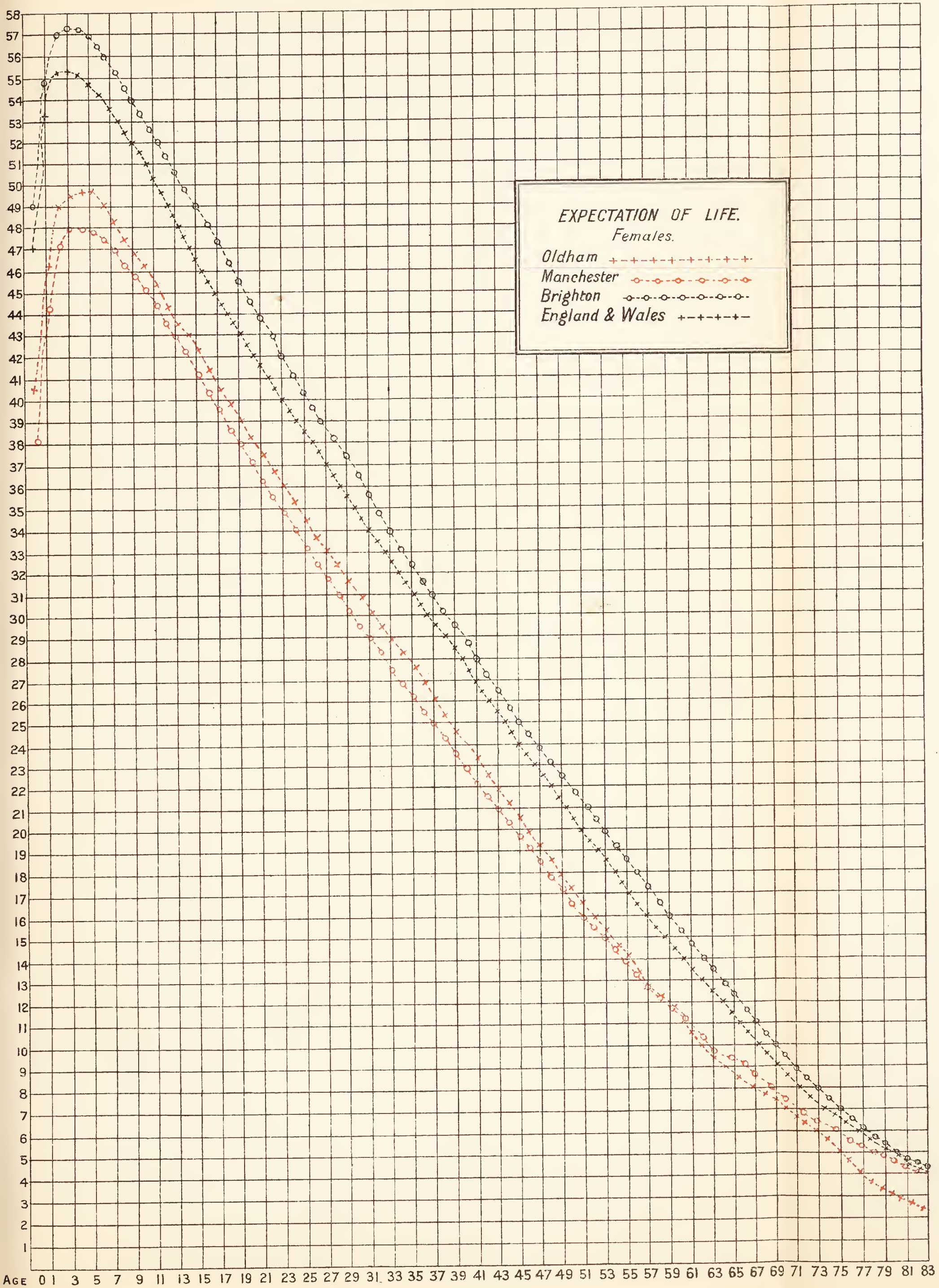
# APPENDIX.

---

## LIFE TABLE FOR OLDHAM,

Based on the Mortality for the
Ten Years 1881-90.


EXPECTATION OF LIFE.
Males.
Oldham
Manchester
Brighton
England & Wales
It will be noticed that the England & Wales & Brighton lines almost exactly correspond, the differences being often so slight as to be unnoticable on a chart this scale.
58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
Age 0 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83


EXPECTATION OF LIFE.
Females.
Oldham
Manchester
Brighton
England & Wales
58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
Age 0 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83

# A LIFE TABLE FOR OLDHAM,

## Based on the Mortality of the Ten Years 1881-1890.

---

It has been my intention for some time to prepare a Life Table for Oldham, but, unfortunately, the pressure of other work has delayed the completion of the task until the present year. In one respect the delay has been of some advantage, as it has enabled me to compare the figures for Oldham with those for England and Wales and for the Healthy Districts for the same period—namely, 1881-90—issued by Dr. Tatham in his report to the Registrar General, published in the present year.

A LIFE TABLE is the only trustworthy measure of the health of a community. The ordinary method of expressing the relation between a population and the deaths occurring in it is as a ratio per thousand living at all ages, which does not afford a fair standard of comparison between different localities, as it is dependent to a certain extent upon the proportion of individuals living in the community at the ages of greater or less mortality and the excess of individuals of either sex; thus a district with a population containing an excessive proportion of young children and old people—periods of life in which mortality is heavy—would, other conditions being equal, show a much higher death rate than the district with a population in which the proportion of individuals at those periods was small.

# Table I.

## CENSUS POPULATION.

### Males.

| Age. | Census, 1881. | Census, 1891. |
|---|---|---|
| Under 5 ... ... ... | 7,486 | 7,507 |
| 5 to 10 ... ... ... | 6,335 | 7,148 |
| 10 to 15 ... ... ... | 5,688 | 7,201 |
| 15 to 20 ... ... ... | 5,313 | 6,528 |
| 20 to 25 ... ... ... | 5,038 | 6,023 |
| 25 to 35 ... ... ... | 8,858 | 10,295 |
| 35 to 45 ... ... ... | 6,454 | 8,091 |
| 45 to 55 ... ... ... | 4,504 | 5,414 |
| 55 to 65 ... ... ... | 2,636 | 3,090 |
| 65 to 75 ... ... ... | 1,002 | 1,279 |
| 75 to 85 ... ... ... | 205 | 269 |
| 85 to 95 ... ... ... | 15 | 16 |
| 95 to 100 ... ... ... | 2 | 1 |
| Over 100 ... ... ... | — | — |
| | 53,536 | 62,862 |

A life table takes all these matters accurately into consideration, and so makes any comparison trustworthy; also, a life table, in showing the expectation of life at each year of age, puts the statistics in a form which is easily understood and most interesting to the public.

The ideal life table represents "a generation of individuals passing through time," showing the average expectation of life at birth and the expectation of life of the survivors at each subsequent year of age until the whole generation has died out; but as it is obviously impossible to obtain full details of each life comprising such a generation, we are compelled to make use of the information contained in the Census reports, which give the population in various groups of ages in 1881 and in 1891, and the records of deaths in the Borough for the same period.

This method is also preferable to such an ideal life table, as it is founded on facts respecting a large number of lives lived at the same time and under similar conditions, and it thus enables us to measure the extent to which such conditions affect the community when a comparison is made with similar life tables for the same periods for other towns.

# Table II.

## CENSUS POPULATION.

### Females.

| Age. | Census, 1881. | Census, 1891. |
|---|---|---|
| Under 5 ... ... ... | 7,251 | 7,959 |
| 5 to 10 ... ... ... | 6,672 | 7,579 |
| 10 to 15 ... ... ... | 5,895 | 7,353 |
| 15 to 20 .. ... ... | 5,811 | 7,173 |
| 20 to 25 ... ... ... | 5,833 | 6,682 |
| 25 to 35 ... ... ... | 9,156 | 11,248 |
| 35 to 45 ... ... ... | 7,021 | 8,451 |
| 45 to 55 ... ... ... | 5,175 | 6,215 |
| 55 to 65 ... ... ... | 3,091 | 3,794 |
| 65 to 75 ... ... ... | 1,264 | 1,744 |
| 75 to 85 ... ... ... | 341 | 381 |
| 85 to 95 ... ... ... | 25 | 22 |
| 95 to 100 ... ... ... | 2 | — |
| Over 100 ... ... ... | — | — |
| | 57,807 | 68,601 |

## Method Adopted in the Construction of the whole of the Oldham Life Table.

*Data.*—The data for the construction of this table were obtained from the Census returns for the Municipal Borough of Oldham and the records of the mortality of the Borough kept in the Sanitary Department.

The actual figures, in groups of ages, are given in Tables numbers I. and II. The Census being taken in April, 1881 and 1891, the figures required adjusting to the middle of the year, and this was done in the usual manner.

*Accuracy of Data.*—The Census is as accurate a statement of a large population as it is possible to obtain; and with regard to the deaths, those occurring in public institutions of the Borough which belong to outside Districts have been excluded and, as far as possible, deaths occurring outside but belonging to Oldham have been included.

The whole of the Data for the construction of these tables is contained in Tables I., II., III., IV. and V.

# Table III.

## DEATHS REGISTERED BELONGING TO THE BOROUGH OF OLDHAM

During the Ten Years, 1881 to 1890.

| Age. | MALES. | FEMALES. |
|---|---|---|
| Under 1 ... ... ... | 3,964 | 3,178 |
| 1 to 2 ... ... .. | 1,403 | 1,402 |
| 2 to 3 ... ... ... | 578 | 500 |
| 3 to 4 . ... ... | 338 | 349 |
| 4 to 5 ... ... ... | 250 | 247 |
| 5 to 10 ... ... .. | 569 | 529 |
| 10 to 15 ... ... | 241 | 265 |
| 15 to 20 ... ... ... | 366 | 368 |
| 20 to 25 ... ... . | 400 | 404 |
| 25 to 35 ... ... ... | 971 | 976 |
| 35 to 45 ... ... .. | 1,223 | 953 |
| 45 to 55 ... ... ... | 1,401 | 1,180 |
| 55 to 65 ... ... ... | 1,453 | 1,426 |
| 65 to 75 ... ... ... | 1,211 | 1,341 |
| 75 to 85 ... ... ... | 453 | 602 |
| 85 to 95 ... ... ... | 63 | 79 |
| Over 95 ... ... ... | 1 | 2 |
| | 14,885 | 13,801 |

## Method of Ascertaining Population and the Deaths for each Year of Age.

In the first place, the total number of lives at risk in each group of ages during the decade was ascertained in the usual manner, and the question then arose as to the best means of distributing the various quinquennial and decennial groups into single age groups, so that the rate of mortality might be ascertained for each year of age.

There are two different methods of effecting this distribution :—

(1) Interpolation by means of finite differences, and

(2) By the Graphic method.

The first method is the one most generally used, being used by the Registrar General, by Dr. Tatham, in his Manchester life tables, and by Dr. Chalmers, in his Glasgow life tables. It is exceedingly rigid, no scope being allowed to the play of the figures, and unless a large number of differences are used, awkward breaks are apt to occur ; moreover, the method involves an immense amount of labour. I, therefore, decided to use in these tables the second method, the chief advantages of which are that the figures for the groups of ages are allowed to determine the course of the curve representing the single age groups, and any special characteristics in the data used are not eliminated, and also a great amount of labour is saved, although very great care has to be used in drawing the curves, and considerable practice is required to get them accurate.

The Graphic method of interpolation has been used by Dr. Newsholme for his Brighton life tables, from which, with his kind permission, I take the description which follows :—

# Table IV.

## BIRTHS REGISTERED IN OLDHAM.

During the Years 1875-1891.

| Year. | MALES. | FEMALES. |
|---|---|---|
| 1875 ... ... ... .. | 1,846 | 1,817 |
| 1876 ... ... .. .. | 1,975 | 1,893 |
| 1877 ... ... ... .. | 1,999 | 2,004 |
| 1878 ... .. ... ... | 2,135 | 1,954 |
| 1879 ... ... ... . | 1,941 | 1,890 |
| 1880 ... ... . ... | 1,976 | 1,949 |
| 1881 ... ... ... .. | 1,959 | 1,998 |
| 1882 ... ... ... .. | 2,013 | 2,009 |
| 1883 ... ... ... .. | 2,074 | 2,102 |
| 1884 ... ... ... ... | 2,227 | 2,181 |
| 1885 ... ... ... .. | 2,262 | 2,223 |
| 1886 ... ... .. ... | 2,140 | 2,081 |
| 1887 ... ... ... ... | 2,103 | 2,082 |
| 1888 ... ... ... ... | 2,107 | 2,076 |
| 1889 ... ... ... .. | 1,998 | 2,032 |
| 1890 ... .. ... ... | 2,004 | 2,018 |
| 1891 ... ... ... ... | 2,102 | 1,958 |

This method was fully described in a paper read by Mr. George King, F.I.A., before the Institute of Actuaries, and published in the Society's journal for October, 1883, and in this paper Mr. King showed that this was the method used by Milne in the construction of the Carlisle table of mortality.

Along the abscissa line, A Z (Plate III.), mark off five equal portions, each to represent five years for the first five quinquennial intervals of age; and let eight other equal portions, each of double length to represent ten years, succeed them for the subsequent decennial intervals of age.

At each of the points A and B erect perpendiculars to A Z, and make the perpendicular lines of such a height, in accordance with the marginal scale previously decided upon, that the parallelogram A B shall equal in dimensions the population living aged 0-5. In the later groups, 10 years are taken. Having thus plotted out the populations living at various groups of ages, the number living at each single year of life is obtained as follows:—

A curved line is described through the parallelograms already drawn, sweeping as easily as possible through the upper part of these parallelograms from A to Z. This curved line (1) must be as liitle curved as other conditions will admit of. (2) It must never change its direction abruptly so as to form an angle in its path. (3) The curved line thus described must so cut each of the parollelograms that the area included between the base line below, the corresponding portion of the two ordinates laterally and the portion of the curved line above, shall equal the area of the parallelograms erected on the same base.

Thus the area of the parallelograms C D = the area of C C D E D. In other words, the area cut off is exactly equal to the area added.

If now the distances A B, B C, C D, D E, &c., along the abscissa line be divided into equal portions, representing one year each, then vertical lines drawn from the centre of each of these spaces will give the central population for each year of age.

The accuracy of the curve is confirmed by ascertaining that the sum of the ordinates drawn, from the base line within each space to the curved line bounding the space above, is equal to the area of the parallelograms drawn on the same base.

The accuracy of this method has been demonstrated and illustrated by Mr. George King in the paper already mentioned, and in a more recent communication to the Institute of Actuaries on Family Annuities (Journal of the Institute of Actuaries, Vol. xxx., p. 291).

The tracing of the curves being effected by a purely graphical process, different draughtsmen may arrive at slightly divergent results.

It is, however, impossible that any material discrepancy can thus arise if due care is exercised and if the rules set forth above are rigidly adhered to.

Having described in full the method by which the central population for each year of age is ascertained, it is not necessary to describe the same process for the deaths occurring at groups of ages. A study of Plates III. and IV., and of the description already given, will render the method easily intelligible.

*Population aged 0-5.*—The graphic method just described gives accurate results for the greater part of life. The first five years of life, however, give special difficulty whatever method of calculating the central population of each of these years is adopted. This is inseparable from the defective character of the data for these years, the ages of young children being often inaccurately stated in the Census returns. Hence, although the number of children at each year of age under 5 can be ascertained from the Census returns, these numbers are untrustworthy. The total number aged 0-5 may be accepted as accurate, but the distribution of this total at each age under 5 must be found by an independent method.

The method adopted is based on the births during the decennium. The population under one year of age in any year may be taken as equal to the births from July 1st to December 31st of the preceding year, *plus* the births from January 1st to June 30th in the same year and *minus* the deaths under one year of age during the same year. Similarly the population under one year of age for the ten years 1881-90 may be taken to be equal to the total births 1880½-1889½, *i.e.*, from July 1st, 1880, to June 30th, 1890, *minus* the number of deaths under one year of age in the ten years 1881-90.

Thus having ascertained the total male births from July 1st, 1880, to June 30th, 1890, and substracting from the result the total number of deaths of males under one year of age in the ten years 1881-90, we

# Table V.

## STATEMENT SHOWING THE NUMBER OF DEATHS IN OLDHAM DURING THE YEARS 1877-1890,

At the various age periods below mentioned.

| Year. | Under 1 year. | 1 and under 2. | 2 and under 3. | 3 and under 4. | 4 and under 5. |
|---|---|---|---|---|---|
| **MALES.** | | | | | |
| 1877 ... ... ... | 353 | 123 | 52 | 41 | 24 |
| 1878 ... ... ... | 389 | 162 | 77 | 55 | 40 |
| 1879 ... ... ... | 338 | 130 | 56 | 29 | 21 |
| 1880 ... ... ... | 397 | 164 | 90 | 46 | 33 |
| 1881 ... ... ... | 341 | 99 | 46 | 31 | 26 |
| 1882 ... ... ... | 389 | 156 | 61 | 39 | 30 |
| 1883 ... ... ... | 377 | 107 | 47 | 26 | 17 |
| 1884 ... ... ... | 417 | 164 | 59 | 37 | 20 |
| 1885 ... ... ... | 414 | 125 | 57 | 27 | 19 |
| 1886 ... ... ... | 429 | 157 | 64 | 24 | 20 |
| 1887 ... ... ... | 442 | 165 | 62 | 52 | 43 |
| 1888 ... ... ... | 353 | 112 | 57 | 40 | 31 |
| 1889 ... ... ... | 395 | 175 | 60 | 32 | 22 |
| 1890 ... ... ... | 384 | 144 | 61 | 27 | 17 |
| **FEMALES.** | | | | | |
| 1877 ... ... ... | 294 | 145 | 47 | 35 | 23 |
| 1878 ... ... ... | 329 | 144 | 82 | 45 | 32 |
| 1879 ... ... ... | 264 | 115 | 53 | 38 | 20 |
| 1880 ... ... ... | 313 | 151 | 75 | 45 | 31 |
| 1881 ... ... ... | 262 | 103 | 35 | 44 | 30 |
| 1882 ... ... ... | 343 | 174 | 57 | 50 | 31 |
| 1883 ... .. ... | 288 | 113 | 32 | 23 | 15 |
| 1884 ... ... ... | 387 | 186 | 67 | 35 | 19 |
| 1885 ... ... ... | 334 | 112 | 37 | 23 | 26 |
| 1886 ... ... ... | 308 | 134 | 62 | 27 | 20 |
| 1887 ... ... ... | 339 | 184 | 83 | 58 | 41 |
| 1888 ... ... ... | 278 | 125 | 53 | 24 | 14 |
| 1889 ... ... ... | 326 | 142 | 52 | 31 | 22 |
| 1890 ... ... ... | 342 | 156 | 41 | 27 | 29 |

obtain the population out of which the deaths at the age 1-2 occur during the same period. Substracting the deaths at the age 1-2 we obtain the number out of which the deaths at the age 2-3 occur; substracting these we obtain the population out of which the deaths at the age 3-4 occur; and substracting these we obtain the population out of which the deaths 4-5 occur.

Having obtained by this means the corrected population at the beginning of each of the first five years of life, we next proceed to obtain the *mean population*, which, for each of these years except the first, may be taken as the geometrical mean between the population at the beginning of the year ($lx$) and at its end ($l_{x+1}$). In other words, the logarithms of the population at the beginning and end of the year are in arithmetical progression.

Having now found the number living and dying at each age, the central death rate ($m_x$) was determined by dividing the latter by the former.

The central death rate is the term used to represent the rate at which the population are dying in the centre of any given year per the unit of population.

The probability of living a year at each age ($p_x$) was found from the formula $p_x = \frac{2-m_x}{2 \times m_x}$.

The life tables were constructed by starting with 100,000 births, male and female.

These are divided into male and female in the population found to exist in the births in Oldham during the ten years 1881-90, thus giving 50,528 males and 49,472 females.

By multiplying by successive values of $p_x$ the numbers surviving at each year of age were obtained.

In order to obtain the mean after life time, or expectation of life at any age, he sum of the years of life lived at such age and upwards was obtained and divided by the number of survivors at such age.

# Plate III.



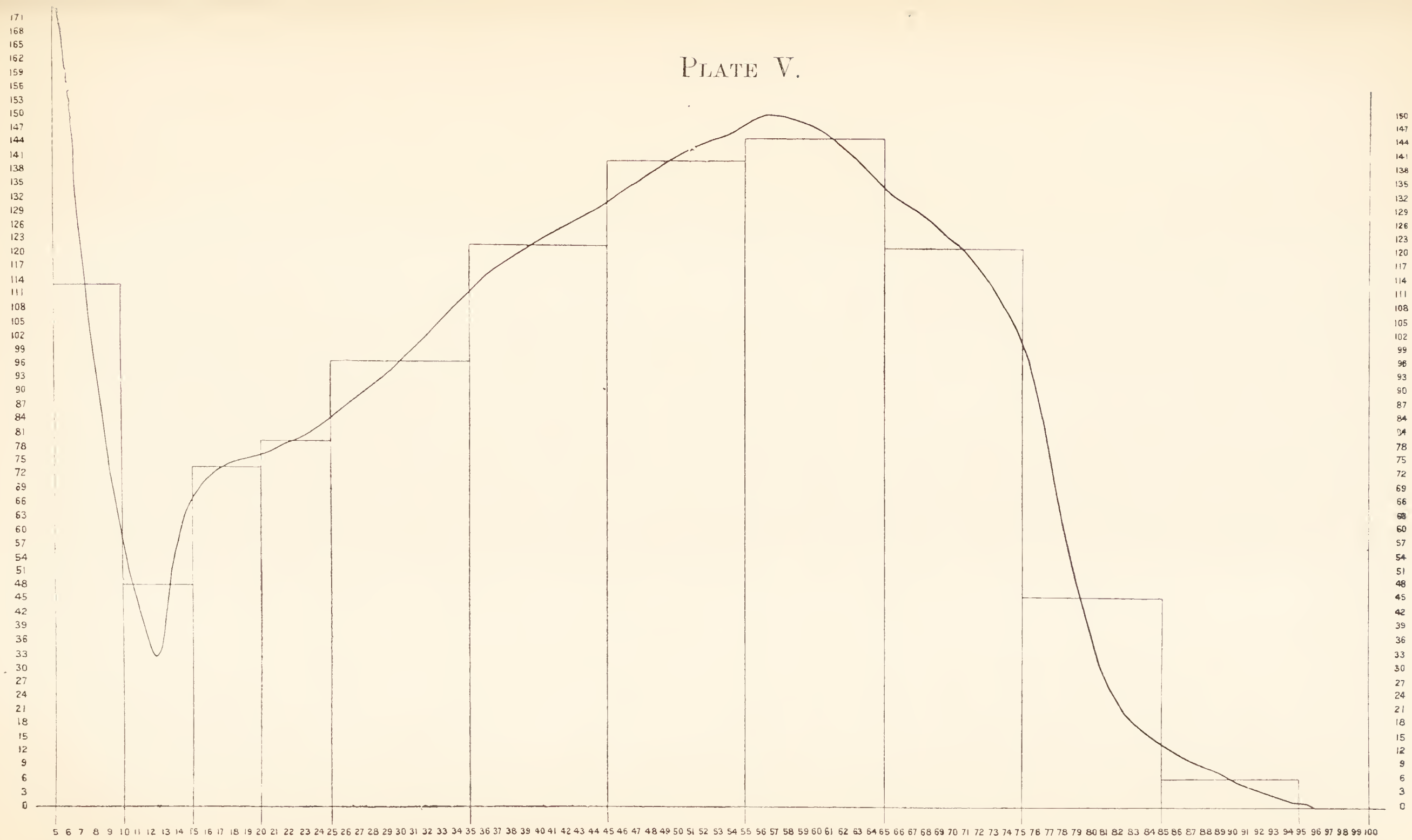

CURVE OF POPULATION.- MALES.

# Plate IV.



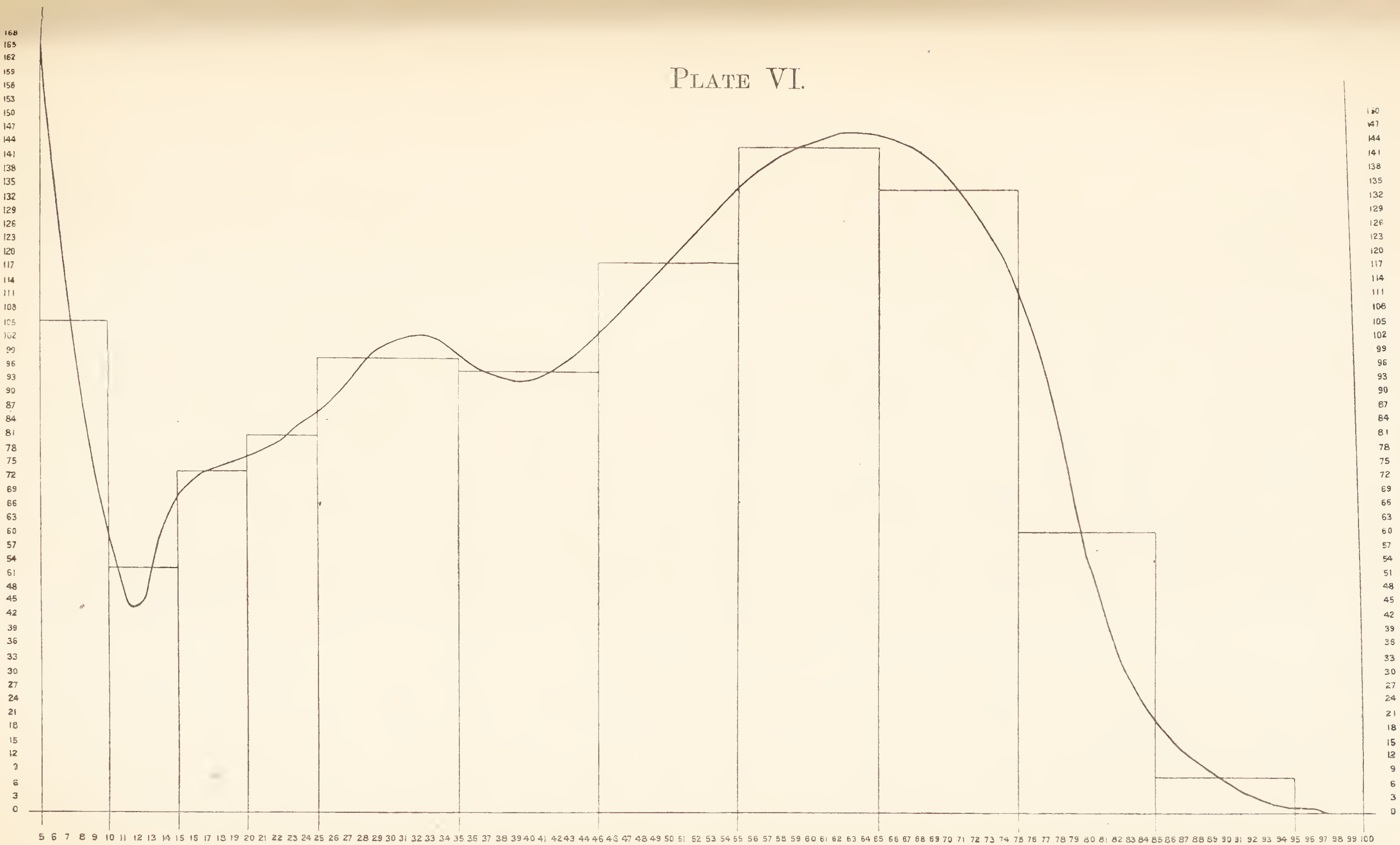
CURVE OF POPULATION.- FEMALES.

# Plate V.




CURVE OF DEATHS, — MALES.

# Plate VI.




CURVE OF DEATHS, — FEMALES

# Table VI.

## DEATH RATES PER 1,000 LIVING AT VARIOUS PERIODS OF LIFE

(Oldham, Manchester, Brighton and Glasgow; also England and Wales) for 1881 to 1890.

| Age. | Oldham. | Manchest'r | Brighton. | Glasgow. | England and Wales. |
|---|---|---|---|---|---|
| **MALES.** | | | | | |
| Under 5 ... ... ... | 87·28 | 83·96 | 64·21 | 86·24 | 61·69 |
| 5 to 10 ... ... ... | 8·43 | 7·62 | 4·83 | 10·65 | 5·34 |
| 10 to 15 ... ... ... | 3·74 | 3·71 | 2·30 | 5·52 | 2·94 |
| 15 to 20 ... ... ... | 6·18 | 5·45 | 4·13 | 7·24 | 4·30 |
| 20 to 25 ... .. ... | 7·22 | 6·95 | 5·05 | 7·93 | 5·71 |
| 25 to 35 ... ... ... | 10·13 | 11·03 | 7·72 | 9·34 | 7·73 |
| 35 to 45 ... .. ... | 16·82 | 19·55 | 12·94 | 15·28 | 12·35 |
| 45 to 55 ... ... ... | 28·24 | 31·14 | 21·17 | 26·50 | 19·28 |
| 55 to 65 ... ... ... | 50·71 | 54·40 | 33·76 | 45·81 | 34·66 |
| 65 to 75 ... ... ... | 106·32 | 102·66 | 64·36 | 84·31 | 70·17 |
| 75 to 85 ... ... ... | 191·62 | 182·23 | 132·29 | 149·47 | 162·18 |
| 85 and upwards ... | 376·47 | 317·13 | 293·80 | 262·08 | |
| All ages ... ... | 25·57 | 26·07 | 20·24 | 25·01 | 20·22 |
| **FEMALES.** | | | | | |
| Under 5 ... ... ... | 73·93 | 70·79 | 52·59 | 75·52 | 51·99 |
| 5 to 10 ... ... ... | 7·41 | 7·40 | 4·45 | 10·14 | 5·25 |
| 10 to 15 ... ... ... | 4·00 | 3·69 | 2·53 | 5·33 | 3·09 |
| 15 to 20 ... ... ... | 5·66 | 4·91 | 2·92 | 7·13 | 4·40 |
| 20 to 25 ... ... ... | 6·44 | 6·11 | 3·44 | 8·94 | 5·51 |
| 25 to 35 ... ... ... | 9·56 | 9·50 | 5·42 | 10·99 | 7·34 |
| 35 to 45 ... ... .. | 12·31 | 15·44 | 9·01 | 14·25 | 10·55 |
| 45 to 55 ... ... ... | 20·71 | 24·35 | 14·44 | 21·54 | 15·04 |
| 55 to 65 ... ... ... | 41·42 | 45·62 | 24·36 | 38·42 | 28·40 |
| 65 to 75 ... ... ... | 89·59 | 87·91 | 50·93 | 70·21 | 60·08 |
| 75 to 85 ... ... ... | 166·58 | 159·77 | 121·92 | 123·75 | 147·32 |
| 85 and upwards ... | 329·17 | 258·33 | 266·40 | 223·97 | |
| All ages ... ... | 21·85 | 22·59 | 15·75 | 23·66 | 18·01 |

## Deductions from the Oldham Life Table.

Full details of the Oldham Life Table will be found in Table A. for males and Table B. for females, which are appended.

In the first column is given the number dying at each year of age; in the second column the number born and surviving at each age; in the third column the total years of life lived at each age; in the fourth column the expectation of life at each age; and in the fifth column the number surviving at each age out of 100,000 born. The last two columns, namely, the expectation of life and the number surviving at each age, are those which possess the greatest interest to the general reader, and I purpose to consider them somewhat in detail.

*Expectation of Life.*—At birth the expectation of life in Oldham for males is 37 years, and for females 41 years. This advantage to the females continues all through the table. From birth the expectation of life increases up to the fourth year for males and the fifth year for females, when for males it is 47 years and for females 50 years. This rise in the expectation of life as age proceeds up to this point is due to the large number of deaths among infants and young children. Thus, whereas a male child born has only a probability of living to be 37 years of age, if he lives to be four the probability is that he will live to be 51; and in the same way a female infant born has a probability of living 41 years, if it lives to be five years then the probability is increased to 55 years.

At the age 10 the male expectation of life is 44 years; or put in another form, the probability is that an individual at that age will live to be 54, and a female will probably live to be 56.

# Table VII.

## EXPECTATION OF LIFE AT VARIOUS AGES.

(Oldham, Manchester, Brighton and Glasgow, also England and Wales.)
1881—1890.

| Age. | Oldham. | Manchest'r | Glasgow. | Brighton. | England and Wales. | England and Wales. — Selected Healthy Districts. |
|---|---|---|---|---|---|---|
| **MALES.** | | | | | | |
| 0 ... ... | 36·88 | 34·71 | 35·18 | 43·59 | 43·66 | 51·44 |
| 5 .. ... | 46·90 | 45·59 | 46·97 | 52·87 | 52·75 | 57·05 |
| 10 ... ... | 43·81 | 42·75 | 44·32 | 49·12 | 49·00 | 53·07 |
| 15 ... ... | 39·59 | 38·78 | 40·51 | 44·67 | 44·47 | 48·62 |
| 20 ... .. | 35·73 | 34·62 | 36·90 | 40·55 | 40·27 | 44·41 |
| 25 ... ... | 31·96 | 30·69 | 33·29 | 36·51 | 36·28 | 40·39 |
| 35 ... ... | 24·82 | 23·76 | 26·06 | 29·02 | 28·91 | 32·70 |
| 45 .. ... | 18·44 | 17·80 | 19·54 | 22·36 | 22·06 | 25·19 |
| 55 .. ... | 12·83 | 12·49 | 13·99 | 16·48 | 15·74 | 18·00 |
| 65 ... ... | 8·05 | 8·15 | 9·38 | 10·96 | 10·31 | 11·60 |
| 75 ... ... | 4·93 | 5·11 | 5·96 | 6·64 | 6·10 | 6·56 |
| **FEMALES.** | | | | | | |
| 0 ... ... | 40·75 | 38·44 | 37·70 | 49·00 | 47·18 | 54·04 |
| 5 ... .. | 49·97 | 48·06 | 48·27 | 56·92 | 54·92 | 50·01 |
| 10 ... ... | 46·44 | 45·43 | 45·44 | 53·15 | 51·10 | 54·01 |
| 15 ... ... | 42·33 | 41·50 | 41·59 | 49·07 | 46·55 | 49·68 |
| 20 ... ... | 38·47 | 37·33 | 38·00 | 44·76 | 42·42 | 45·62 |
| 25 . ... | 34·65 | 33·38 | 34·60 | 40·48 | 38·50 | 41·71 |
| 35 .. ... | 27·63 | 26·30 | 28·06 | 32·48 | 31·16 | 34·16 |
| 45 ... ... | 20·57 | 19·79 | 21·61 | 25·07 | 24·05 | 26·56 |
| 55 ... .. | 14·10 | 13·91 | 15·60 | 18·48 | 17·23 | 19·06 |
| 65 ... ... | 8·87 | 9·11 | 10·69 | 12·19 | 11·26 | 12·36 |
| 75 ... . | 5·16 | 5·76 | 6·97 | 6·97 | 6·68 | 7·14 |

At age 20 a male would have a probability of living to the age of 56, and a female to 58.

At age 30 a male would probably live to be 58, and a female 61.

At 40 a male would have a probability of living to 62, and a female to 64 ; and

At 50 a male to 65, and a female to 67.

This expectation is graphically shown in the accompanying charts, (Plates I. & II.) in which is also exhibited a comparison between Oldham, Manchester, Brighton, and England and Wales as a whole.

This comparison is shown in another form in Table VII., from which it will be seen that at birth the expectation of life in Oldham is two years greater than Manchester, two years greater than Glasgow, seven years less than Brighton, and seven years less than England and Wales.

At 10 years of age the expectation in Oldham is one year more than Manchester, is almost the same as Glasgow, and is five years less than Brighton and England and Wales.

At 20 years of age the expectation is still one year more than Manchester, but it is now one year less than Glasgow, five years less than Brighton, and four years less than England and Wales.

At 35 years of age the relation remains about the same.

At 55 years of age the expectation in Oldham is about half-a-year more than Manchester, is a year less than Glasgow, three years less than Brighton, and three years less than England and Wales.

At 65 years it is the same as Manchester, and at 75 is a shade less.

# Table VIII.

## NUMBER SURVIVING OUT OF 100,000 BORN.

| Age. | Oldham. | Manchest'r (City). | Glasgow. | Brighton. | England and Wales. | England and Wales. — Healthy Districts. |
|---|---|---|---|---|---|---|
| **MALES.** | | | | | | |
| 0 ... ... | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 5 ... ... | 70,048 | 67,896 | 66,870 | 75,125 | 75,149 | 82,686 |
| 10 ... ... | 67,157 | 64,675 | 63,550 | 73,344 | 73,348 | 81,182 |
| 25 ... ... | 61,590 | 59,645 | 57,388 | 69,283 | 89,381 | 77,244 |
| 45 ... ... | 46,645 | 43,664 | 44,653 | 56,175 | 56,444 | 66,389 |
| 60 ... ... | 27,308 | 25,117 | 27,835 | 39,163 | 39,840 | 52,507 |
| **FEMALES.** | | | | | | |
| 0 ... ... | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 5 ... ... | 73,650 | 71,792 | 69,992 | 78,546 | 78,324 | 85,517 |
| 10 ... ... | 70,970 | 68,256 | 66,865 | 76,811 | 76,615 | 84,006 |
| 25 ... ... | 65,409 | 63,300 | 60,108 | 73,470 | 72,479 | 79,303 |
| 45 ... ... | 52,290 | 49,192 | 46,597 | 63,475 | 60,401 | 68,654 |
| 60 ... ... | 35,523 | 31,544 | 31,647 | 49,228 | 45,768 | 56,264 |

The tables for females show an almost identical relationship between the various towns. Thus, in Oldham the expectation of life may be said generally to be better than Manchester, up to the age of 60, beyond which point it falls slightly below it.

In comparison with Glasgow, Oldham is slightly better the first five years of life, owing probably to the greater infantile mortality in Glasgow, but beyond that period Glasgow conditions are more favourable to life than Oldham. Brighton, as might have been expected, shows more favourable conditions throughout the whole of life; and it is very singular to note the very close correspondence between the facts for Brighton and those for the whole of England and Wales.

In considering these comparisons, it is interesting to note that the population of Oldham is almost entirely working class, and what is more, the proportion of the lowest grade of society in the Borough is very small. The population is exceedingly well paid, well fed, and well housed, and taking all these things into consideration, it is somewhat surprising to find that Glasgow compares so favourably with Oldham, and that Manchester is so little worse. The bleak and exposed position of the town, which is situated on the verge of the Pennines, and is mainly built on clay, probably accounts for the extensive mortality among the old people, and no doubt tells adversely throughout the whole periods of life.

A large proportion of the female population is employed in the cotton industry, but this does not seem to have had any special influences on the mortality, as the relative position of Oldham to the other towns is practically the same for females as for males.

*Number Surviving out of 100,000 Born.*—This column in the life table shows, perhaps, most distinctly the full effect of mortality on the population.

Thus, in Oldham, at five years of age, there would be 70,048 males surviving and 73,650 females surviving out of 100,000 born in each case. At 10 years of age the numbers are 67,157 and 70,970 respectively; at 25 years, 61,590 and 65,409; at 45 years of age, 46,645 and 52,290; at 60 years of age, 27,308 and 35,523; and at 90 years of age, 38 males against 49 females.

In Table VIII. the comparison with the other towns—Manchester, Glasgow and Brighton—and with England and Wales, is clearly shown.

In Tables VII. and VIII. there will be found a column of figures which have not yet been referred to, namely, those for the Healthy Districts of England and Wales. These are inserted from the Registrar General's Report, and are intended to serve as an index of what ought to be the probabilities of life under reasonably healthy conditions.

It must be the aim of every one interested in the welfare of the town, and of the people individually, to endeavour to bring about a condition of things in Oldham which would produce similar conditions as to health and usefulness of the individual as are shown in these figures to actually exist in a large portion of England and Wales.

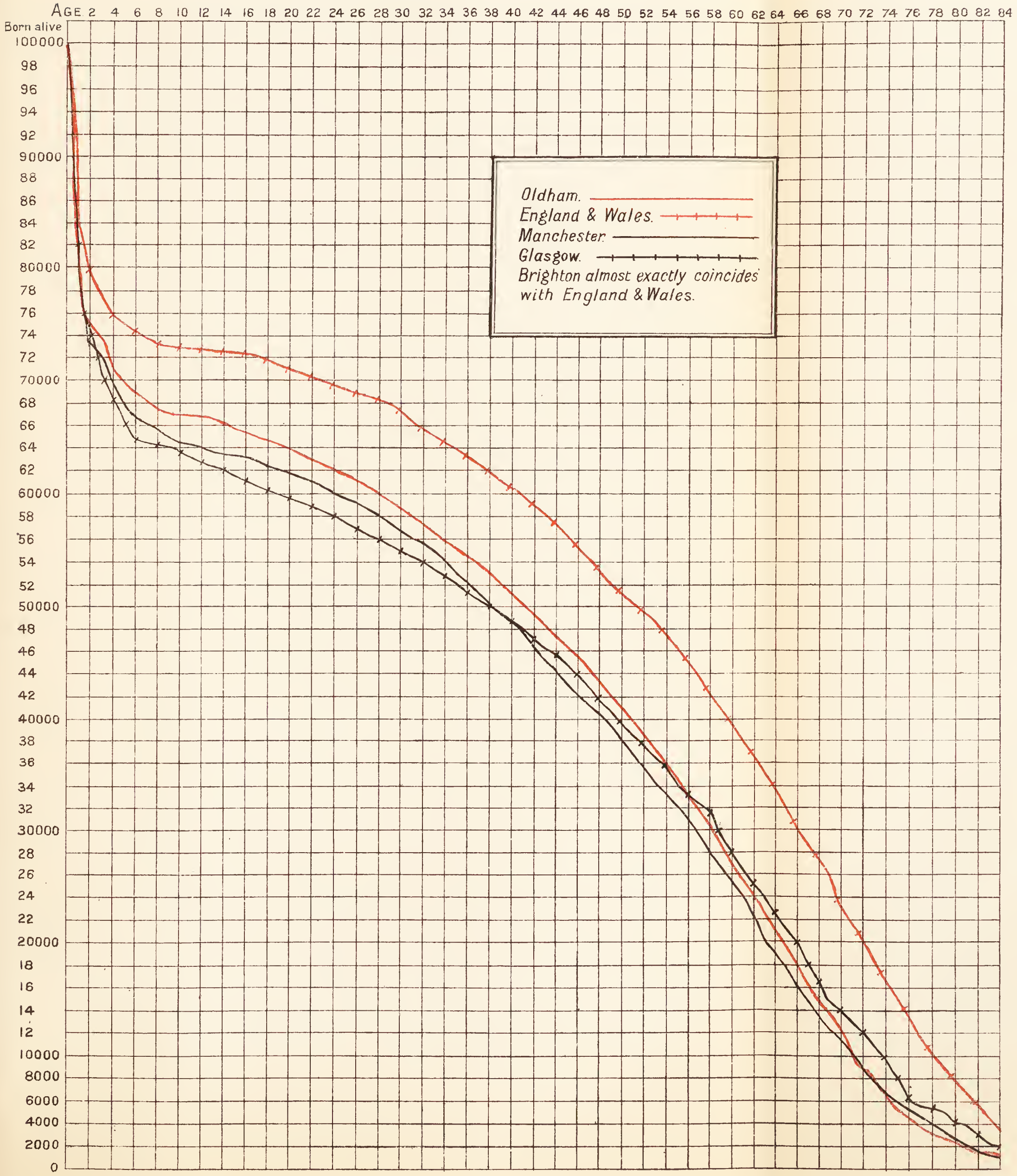
# Table IX.

## SURVIVORS AT QUINQUENNIAL AGES OUT OF 100,000 BORN.

[Comparison of Five Life Tables.]

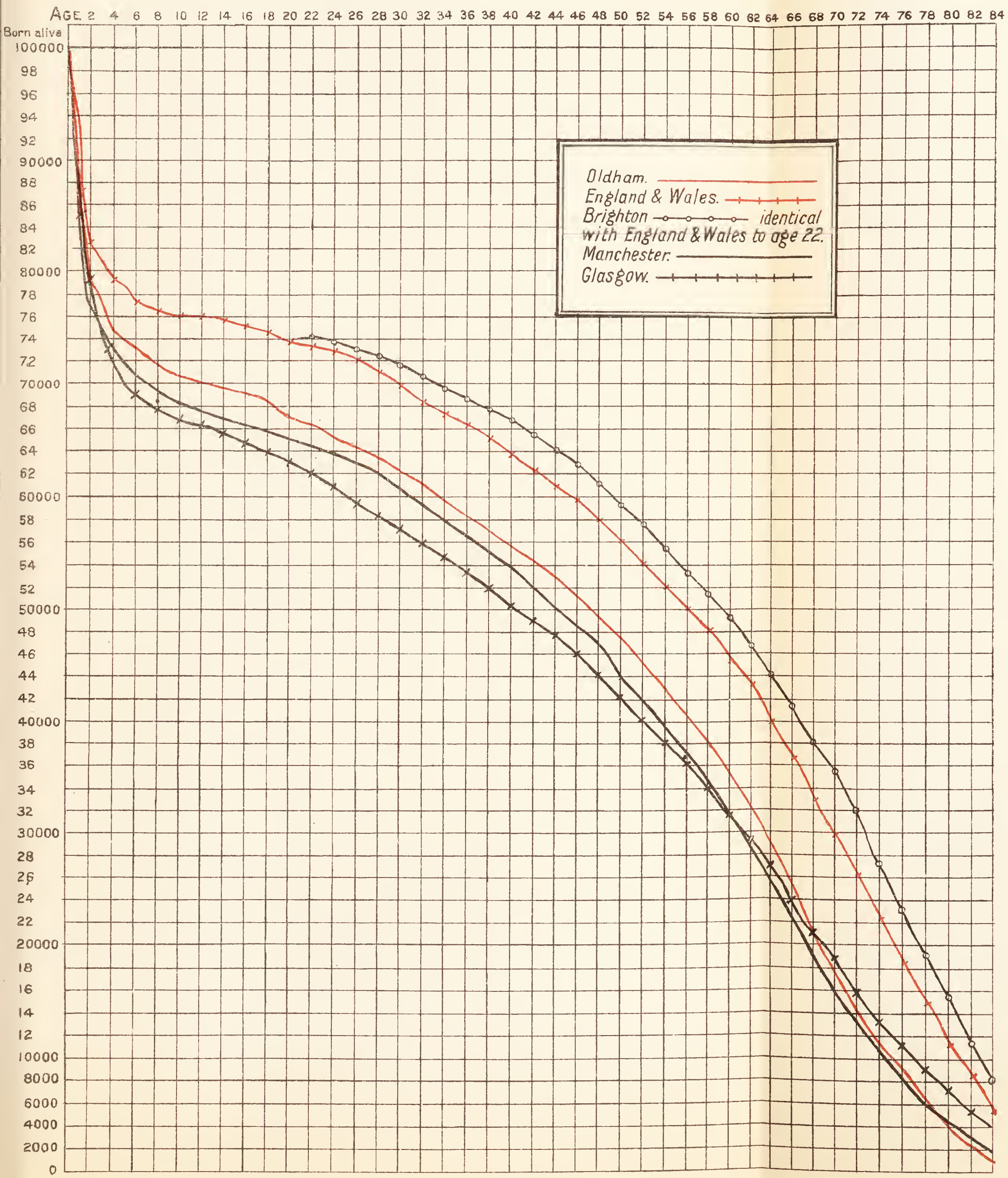
| Age. | Born and Surviving at each Age. | | | | | Age. |
|---|---|---|---|---|---|---|
| | England and Wales. | | | Selected Healthy Districts. | | |
| | 1838-54. | 1871-80. | 1881-90. | 1849-53. | 1881-90. | |
| **MALES.** | | | | | | |
| 0 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 0 |
| 5 | 72,372 | 73,407 | 75,149 | 81,410 | 82,686 | 5 |
| 10 | 68,986 | 70,899 | 73,348 | 78,570 | 81,182 | 10 |
| 15 | 67,278 | 69,642 | 72,619 | 77,109 | 80,306 | 15 |
| 20 | 65,190 | 68,003 | 71,256 | 75,087 | 78,960 | 20 |
| 25 | 62,422 | 65,708 | 69,381 | 72,385 | 77,144 | 25 |
| 30 | 59,509 | 63,004 | 66,928 | 69,599 | 74,903 | 30 |
| 35 | 56,445 | 59,886 | 63,965 | 66,699 | 72,385 | 35 |
| 40 | 53,166 | 56,308 | 60,492 | 63,783 | 69,585 | 40 |
| 45 | 49,577 | 52,237 | 56,444 | 60,698 | 66,389 | 45 |
| 50 | 45,573 | 47,698 | 51,764 | 57,266 | 62,674 | 50 |
| 55 | 40,946 | 42,468 | 46,298 | 53,281 | 58,159 | 55 |
| 60 | 35,633 | 36,501 | 39,840 | 48,501 | 52,507 | 60 |
| 65 | 29,459 | 29,716 | 32,238 | 41,940 | 45,212 | 65 |
| 70 | 22,349 | 22,206 | 23,863 | 33,535 | 36,096 | 70 |
| 75 | 14,808 | 14,496 | 15,389 | 23,822 | 25,362 | 75 |
| 80 | 8,034 | 7,735 | 8,002 | 14,122 | 14,349 | 80 |
| 85 | 3,298 | 3,079 | 2,987 | 6,416 | 5,702 | 85 |
| 90 | 932 | 802 | 679 | 2,005 | 1,308 | 90 |
| 95 | 163 | 118 | 75 | 379 | 133 | 95 |
| 100 | 15 | 8 | 3 | 87 | 4 | 100 |
| **FEMALES.** | | | | | | |
| 0 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 0 |
| 5 | 75,055 | 76,262 | 78,324 | 83,556 | 85,517 | 5 |
| 10 | 71,577 | 73,838 | 76,615 | 80,524 | 84,006 | 10 |
| 15 | 69,692 | 72,496 | 75,906 | 78,639 | 82,927 | 15 |
| 20 | 67,412 | 70,795 | 74,432 | 76,137 | 81,313 | 20 |
| 25 | 64,434 | 68,486 | 72,479 | 73,142 | 79,303 | 25 |
| 30 | 61,277 | 65,842 | 70,005 | 70,036 | 76,933 | 30 |
| 35 | 57,991 | 62,884 | 67,099 | 66,893 | 74,313 | 35 |
| 40 | 54,584 | 59,611 | 63,891 | 63,728 | 71,554 | 40 |
| 45 | 51,040 | 56,017 | 60,401 | 60,501 | 68,654 | 45 |
| 50 | 47,325 | 52,090 | 56,430 | 57,138 | 65,406 | 50 |
| 55 | 43,333 | 47,774 | 51,638 | 53,541 | 61,409 | 55 |
| 60 | 38,397 | 42,284 | 45,768 | 49,226 | 56,264 | 60 |
| 65 | 32,417 | 35,617 | 38,550 | 43,004 | 49,407 | 65 |
| 70 | 25,316 | 27,723 | 29,922 | 35,055 | 40,425 | 70 |
| 75 | 17,480 | 19,057 | 20,421 | 25,661 | 29,410 | 75 |
| 80 | 10,039 | 10,894 | 11,454 | 15,859 | 17,688 | 80 |
| 85 | 4,442 | 4,763 | 4,813 | 7,603 | 7,912 | 85 |
| 90 | 1,380 | 1,423 | 1,342 | 2,537 | 2,276 | 90 |
| 95 | 270 | 253 | 212 | 516 | 348 | 95 |
| 100 | 30 | 23 | 16 | 55 | 22 | 100 |

Diagram showing the number that survive to each age out of 100,000 Male children born.



# Plate VIII.

Diagram showing the number that survive to each age out of 100,000 Female children born.



That the conditions represented in Dr. Tatham's Healthy District Life Tables are essentially within the reach of possibility, may be gathered from the fact that this table is calculated from the results of 264 districts, with an aggregate population of 4,606,503, or about one-sixth of the whole population of England and Wales.

When we come to compare Oldham with this practical standard, it is distressing to find the comparison so unfavourable to town life and conditions of work, even when on the surface they appear so favourable.

Thus, among males the number surviving in Oldham at 10 years of age out of 100,000 born is 67,157, as compared with 81,182 in the Healthy Districts; or in other words, during the first 10 years of life alone in Oldham 14,025 out of 100,000 born die, above what may be considered the standard rate of mortality.

By the time the age of 60 years is reached in Oldham there are only 27,308 left, against 52,507 in the Healthy District; or in other words, whereas under what may be considered the standard rate of mortality more than half the children born are remaining alive at 60 years of age, in Oldham little more than a quarter survive.

These facts are surely startling enough to make the necessity for increased activity very evident in all the various directions in which health and life is affected, such as the providing of healthy homes, healthy conditions of work, pure atmosphere, etc.

It should not be forgotten that all these lost lives, which are now thrown away, possess a pecuniary value to the community, but this is an aspect of the question into which I do not purpose to enter.

In Table IX., which is extracted from Dr. Tatham's report to the Registrar General, will be found an interesting series of figures, which show, both for males and females, the number surviving out of 100,000 born in the periods 1838-1854, 1871 to 1880, and 1881 to 1890.

From these tables it is interesting to observe how during this period of 50 years there has been steady improvement, the numbers surviving being greater for each age period, in 1881 to 1890, up to the age of 75 for males and 85 for females, although on the contrary the numbers living to extreme old age have diminished.

# OLDHAM LIFE TABLE.

Based on the mortality of ten years, 1881-1890.

## Table A.—MALES.

| Age | Dying in each year of age | Born & Surviving at each age | Sum of the numbers living, or years of life lived at each age and upwards to the last age in the Table. | Mean after life time (expectation of life) at each age. | Number surviving at each age out of 100,000 born. |
|---|---|---|---|---|---|
| 0 | 8,765 | 50,528 | 1,863,614 | 36·88 | 100,000 |
| 1 | 3,474 | 41,763 | 1,813,086 | 43·41 | 82,653 |
| 2 | 1,431 | 38,289 | 1,771,323 | 46·26 | 75,778 |
| 3 | 838 | 36,858 | 1,733,034 | 47·02 | 72,946 |
| 4 | 626 | 36,020 | 1,696,176 | 47·09 | 71,287 |
| 5 | 436 | 35,394 | 1,660,156 | 46·90 | 70,048 |
| 6 | 351 | 34,958 | 1,624,762 | 46·48 | 69,185 |
| 7 | 280 | 34,607 | 1,589,804 | 45 94 | 68,491 |
| 8 | 221 | 34,327 | 1,555,197 | 45·30 | 67,937 |
| 9 | 173 | 34,106 | 1,520,870 | 44·59 | 67,499 |
| 10 | 135 | 33,933 | 1,486,764 | 43·81 | 67,157 |
| 11 | 107 | 33.798 | 1,452,831 | 42·98 | 66,890 |
| 12 | 87 | 33,691 | 1,419,033 | 42·12 | 66,681 |
| 13 | 138 | 33,604 | 1,385,342 | 41·22 | 66,506 |
| 14 | 170 | 33,466 | 1,351,738 | 40·39 | 66,232 |
| 15 | 187 | 33,296 | 1,318,272 | 39·59 | 65,896 |
| 16 | 199 | 33,109 | 1,284,976 | 38·81 | 65,526 |
| 17 | 199 | 32,910 | 1,251,867 | 38·04 | 65,132 |
| 18 | 208 | 32,711 | 1,218,957 | 37·26 | 64,738 |
| 19 | 217 | 32,503 | 1,186,246 | 36·50 | 64,327 |
| 20 | 220 | 32,286 | 1,153,743 | 35·73 | 63,897 |
| 21 | 228 | 32,066 | 1,121,457 | 34·97 | 63,462 |
| 22 | 234 | 31,838 | 1,089,391 | 34·22 | 63,011 |
| 23 | 239 | 31,604 | 1,057,553 | 33·46 | 62,546 |
| 24 | 245 | 31,365 | 1,025,949 | 32·71 | 62,074 |
| 25 | 253 | 31,120 | 994,584 | 31·96 | 61,590 |
| 26 | 261 | 30,867 | 963,464 | 31·21 | 61,089 |
| 27 | 272 | 30,606 | 932,597 | 30·47 | 60,572 |
| 28 | 283 | 30,334 | 901,991 | 29·73 | 60,034 |
| 29 | 297 | 30,051 | 871,657 | 29·00 | 59,474 |
| 30 | 313 | 29,754 | 841,606 | 28·28 | 58,886 |
| 31 | 328 | 29,441 | 811,852 | 27·57 | 58,267 |
| 32 | 342 | 29,113 | 782,411 | 26·87 | 57,618 |
| 33 | 356 | 28,771 | 753,298 | 26·18 | 56,941 |
| 34 | 368 | 28,415 | 724,527 | 25·49 | 56,236 |

## Table A.—MALES. (Continued.)

| Age. | Dying in each year of age. | Born & Surviving at each age. | Sum of the numbers living, or years of life lived at each age and upwards to the last age in the Table. | Mean after life time (expectation of life) at each age. | Number surviving at each age out of 100,000 born. |
|---|---|---|---|---|---|
| 35 | 381 | 28,047 | 696,112 | 24·82 | 55,508 |
| 36 | 396 | 27,666 | 668,065 | 24·15 | 54,754 |
| 37 | 411 | 27,270 | 640,399 | 23·48 | 53,970 |
| 38 | 427 | 26,859 | 613,129 | 22·83 | 53,157 |
| 39 | 443 | 26,432 | 586,270 | 22·18 | 52,312 |
| 40 | 460 | 25,989 | 559,838 | 21·54 | 51,435 |
| 41 | 472 | 25,529 | 533,849 | 20·91 | 50,524 |
| 42 | 485 | 25,057 | 508,320 | 20·29 | 49,590 |
| 43 | 497 | 24,572 | 483,263 | 19·67 | 48,630 |
| 44 | 506 | 24,075 | 458,691 | 19·05 | 47,647 |
| 45 | 517 | 23,569 | 434,616 | 18·44 | 46,645 |
| 46 | 527 | 23,052 | 411,047 | 17·83 | 45,622 |
| 47 | 544 | 22,525 | 387,995 | 17·22 | 44,579 |
| 48 | 561 | 21,981 | 365,470 | 16·63 | 43,503 |
| 49 | 580 | 21,420 | 343,489 | 16·04 | 42,392 |
| 50 | 616 | 20,840 | 322,069 | 15·45 | 41,244 |
| 51 | 644 | 20,224 | 301,229 | 14·88 | 40,025 |
| 52 | 672 | 19,580 | 281,005 | 14·35 | 38,751 |
| 53 | 703 | 18,908 | 261,425 | 13·83 | 37,421 |
| 54 | 727 | 18,205 | 242,517 | 13·32 | 36,029 |
| 55 | 740 | 17,478 | 224,312 | 12·83 | 34,591 |
| 56 | 749 | 16,738 | 206,834 | 12·36 | 33,126 |
| 57 | 743 | 15,989 | 190,096 | 11·89 | 31,644 |
| 58 | 729 | 15,246 | 174,107 | 11·42 | 30,173 |
| 59 | 719 | 14,517 | 158,861 | 10·94 | 28,731 |
| 60 | 717 | 13,798 | 144,344 | 10·46 | 27,308 |
| 61 | 710 | 13,081 | 130,546 | 9·98 | 25,889 |
| 62 | 710 | 12,371 | 117,465 | 9·49 | 24,483 |
| 63 | 693 | 11,661 | 105,094 | 9·01 | 23,078 |
| 64 | 722 | 10,968 | 93,433 | 8·52 | 21,705 |
| 65 | 751 | 10,246 | 82,465 | 8·05 | 20,278 |
| 66 | 778 | 9,495 | 72,219 | 7·61 | 18,792 |
| 67 | 792 | 8,717 | 62,724 | 7·20 | 17,252 |
| 68 | 788 | 7,925 | 54,007 | 6·81 | 15,684 |
| 69 | 778 | 7,137 | 46,082 | 6·46 | 14,125 |
| 70 | 770 | 6,359 | 38,945 | 6·12 | 12,585 |
| 71 | 725 | 5,589 | 32,586 | 5·83 | 11,061 |
| 72 | 691 | 4,864 | 26,997 | 5·55 | 9,626 |
| 73 | 658 | 4,173 | 22,133 | 5·30 | 8,259 |
| 74 | 583 | 3,515 | 17,960 | 5·11 | 6,940 |

TABLE A.—MALES. (Continued.)

| Age. | Dying in each year of age. | Born & Surviving at each age. | Sum of the numbers living, or years of life lived at each age and upwards to the last age in the Table. | Mean after life time (expectation of life) at each age. | Number surviving at each age out of 100,000 born. |
|---|---|---|---|---|---|
| 75 | 489 | 2,932 | 14,445 | 4·93 | 5,803 |
| 76 | 443 | 2,443 | 11,513 | 4·71 | 4,835 |
| 77 | 355 | 2,000 | 9,070 | 4·53 | 3,958 |
| 78 | 291 | 1,645 | 7,070 | 4·30 | 3,256 |
| 79 | 244 | 1,354 | 5,425 | 4·00 | 2,680 |
| 80 | 218 | 1,110 | 4,071 | 3·67 | 2,197 |
| 81 | 205 | 892 | 2,961 | 3·32 | 1,765 |
| 82 | 211 | 687 | 2,069 | 3·00 | 1,360 |
| 83 | 150 | 476 | 1,382 | 2·90 | 942 |
| 84 | 111 | 326 | 906 | 2·78 | 645 |
| 85 | 75 | 215 | 580 | 2·70 | 426 |
| 86 | 50 | 140 | 365 | 2·61 | 277 |
| 87 | 32 | 90 | 225 | 2·50 | 178 |
| 88 | 23 | 58 | 135 | 2·33 | 115 |
| 89 | 16 | 35 | 77 | 2·20 | 69 |
| 90 | 8 | 19 | 42 | 2·21 | 38 |
| 91 | 5 | 11 | 23 | 2·09 | 22 |
| 92 | 3 | 6 | 12 | 2·00 | 12 |
| 93 | 1 | 3 | 6 | 2·00 | 6 |
| 94 | 1 | 2 | 3 | 1·50 | 4 |
| 95 | 1 | 1 | 1 | ... | 2 |

# OLDHAM LIFE TABLE.

Based on the mortality of ten years, 1881 to 1890.

## Table B.—FEMALES.

| Age. | Dying in each year of age. | Born and Surviving at each age. | Sum of the numbers living, or years of life lived at each age and upwards to the last age in the Table. | Mean after life time (expectation of life) at each age. | Number surviving at each age out of 100,000 born. |
|---|---|---|---|---|---|
| 0 | 6,921 | 49,472 | 2,015,795 | 40·75 | 100,000 |
| 1 | 3,412 | 42,551 | 1,966,323 | 46·21 | 86,010 |
| 2 | 1,223 | 39,139 | 1,923,772 | 49·15 | 79,113 |
| 3 | 864 | 37,916 | 1,884,633 | 49·73 | 76,641 |
| 4 | 616 | 37,052 | 1,846,717 | 49·84 | 74,895 |
| 5 | 379 | 36,436 | 1,809,665 | 49·97 | 73,650 |
| 6 | 312 | 36,057 | 1,773,229 | 49·18 | 72,884 |
| 7 | 256 | 35,745 | 1,737,172 | 48·60 | 72,253 |
| 8 | 208 | 35,489 | 1,701,427 | 47·46 | 71,736 |
| 9 | 171 | 35,281 | 1,665,938 | 47·22 | 71,315 |
| 10 | 142 | 35,110 | 1,630,657 | 46·44 | 70,970 |
| 11 | 116 | 34,968 | 1,595,547 | 45·63 | 70,682 |
| 12 | 120 | 34,852 | 1,560,579 | 44·77 | 70,448 |
| 13 | 152 | 34,732 | 1,525,727 | 43·93 | 70,205 |
| 14 | 173 | 34,580 | 1,490,995 | 43·11 | 69,898 |
| 15 | 185 | 34,407 | 1,456,415 | 42·33 | 69,545 |
| 16 | 193 | 34,222 | 1,422,008 | 41·55 | 69,174 |
| 17 | 196 | 34,029 | 1,387,786 | 40·78 | 68,784 |
| 18 | 199 | 33,833 | 1,353,757 | 40·01 | 68,388 |
| 19 | 201 | 33,634 | 1,319,924 | 39·24 | 67,986 |
| 20 | 203 | 33,433 | 1,286,290 | 38·47 | 67,580 |
| 21 | 208 | 33,230 | 1,252,857 | 37·70 | 67,169 |
| 22 | 211 | 33,022 | 1,219,627 | 36·93 | 66,749 |
| 23 | 221 | 32,811 | 1,186,605 | 36·16 | 66,322 |
| 24 | 231 | 32,590 | 1,153,794 | 35·40 | 65,876 |
| 25 | 242 | 32,359 | 1,121,204 | 34·65 | 65,409 |
| 26 | 257 | 32,117 | 1,088,845 | 33·90 | 64,920 |
| 27 | 272 | 31,860 | 1,056,728 | 33·17 | 64,400 |
| 28 | 295 | 31,588 | 1,024,868 | 32·44 | 63,850 |
| 29 | 307 | 31,293 | 993,280 | 31·74 | 63,254 |
| 30 | 315 | 30,986 | 961,987 | 31·04 | 62,633 |
| 31 | 324 | 30,671 | 931,001 | 30·35 | 61,997 |
| 32 | 334 | 30,347 | 900,330 | 29·67 | 61,342 |
| 33 | 339 | 30,013 | 869,983 | 28·99 | 60,667 |
| 34 | 344 | 29,674 | 839,970 | 28·31 | 59,981 |

## Table B.—FEMALES. (Continued.)

| Age. | Dying in each year of age. | Born and Surviving at each age. | Sum of the numbers living, or years of life lived at each age and upwards to the last age in the Table. | Mean after life time (expectation of life) at each age. | Number surviving at each age out of 100,000 born. |
|---|---|---|---|---|---|
| 35 | 340 | 29,330 | 810,296 | 27·63 | 59,286 |
| 36 | 336 | 28,990 | 780,966 | 26·94 | 58,599 |
| 37 | 333 | 28,654 | 751,976 | 26·24 | 57,920 |
| 38 | 328 | 28,321 | 723,322 | 25·54 | 57,247 |
| 39 | 325 | 27,993 | 695,001 | 24·83 | 56,583 |
| 40 | 330 | 27,668 | 667,008 | 24·11 | 55,927 |
| 41 | 337 | 27,338 | 639,340 | 23·39 | 55,260 |
| 42 | 353 | 27,001 | 612,002 | 22·66 | 54,578 |
| 43 | 378 | 26,648 | 585,001 | 21·95 | 53,865 |
| 44 | 401 | 26,270 | 558,353 | 21·25 | 53,100 |
| 45 | 414 | 25,869 | 532,083 | 20·57 | 52,290 |
| 46 | 435 | 25,455 | 506,214 | 19·89 | 51,453 |
| 47 | 457 | 25,020 | 480,759 | 19·21 | 50,574 |
| 48 | 474 | 24,563 | 455,739 | 18·63 | 49,650 |
| 49 | 492 | 24,089 | 431,176 | 17·90 | 48,692 |
| 50 | 509 | 23,597 | 407,087 | 17·25 | 47,698 |
| 51 | 531 | 23,088 | 383,490 | 16·61 | 46,669 |
| 52 | 542 | 22,557 | 360,402 | 15·98 | 45,596 |
| 53 | 554 | 22,015 | 337.845 | 15·35 | 44,507 |
| 54 | 578 | 21,461 | 315,830 | 14·72 | 43,380 |
| 55 | 601 | 20,883 | 294,369 | 14·10 | 42,212 |
| 56 | 632 | 20,282 | 273,486 | 13·48 | 40,997 |
| 57 | 665 | 19,650 | 253,204 | 12·88 | 39,720 |
| 58 | 694 | 18,985 | 233,554 | 12·30 | 38,375 |
| 59 | 717 | 18,291 | 214,569 | 11·73 | 36,972 |
| 60 | 754 | 17,574 | 196,278 | 11·17 | 35,523 |
| 61 | 808 | 16,820 | 178,704 | 10·62 | 33,999 |
| 62 | 890 | 16,012 | 161,884 | 10·11 | 32,366 |
| 63 | 957 | 15,122 | 145,872 | 9·65 | 30,567 |
| 64 | 1030 | 14,165 | 130,750 | 9·23 | 28,632 |
| 65 | 993 | 13,135 | 116,585 | 8·87 | 26,550 |
| 66 | 975 | 12,142 | 103,450 | 8.52 | 24,543 |
| 67 | 945 | 11,167 | 91,308 | 8·18 | 22,572 |
| 68 | 888 | 10,222 | 80,141 | 7·84 | 20,662 |
| 69 | 857 | 9,334 | 69,919 | 7·49 | 18,867 |
| 70 | 805 | 8,477 | 60,585 | 7·15 | 17,135 |
| 71 | 755 | 7,672 | 52,108 | 6·79 | 15,508 |
| 72 | 710 | 6,917 | 44,436 | 6·42 | 13,982 |
| 73 | 652 | 6,207 | 37,519 | 6·04 | 12,547 |
| 74 | 566 | 5,555 | 31,312 | 5·64 | 11,229 |

## Table B.—FEMALES. (Continued.)

| Age. | Dying in each year of age. | Born and Surviving at each age. | Sum of the numbers living, or years of life lived at each age and upwards to the last age in the Table. | Mean after life time (expectation of life) at each age. | Number surviving at each age out of 100,000 born. |
|---|---|---|---|---|---|
| 75 | 511 | 4,989 | 25,757 | 5·16 | 10,084 |
| 76 | 532 | 4,478 | 20,768 | 4·64 | 9,052 |
| 77 | 599 | 3,946 | 16,290 | 4·13 | 7,976 |
| 78 | 669 | 3,347 | 12,344 | 3·69 | 6,765 |
| 79 | 653 | 2,678 | 8,997 | 3·36 | 5,413 |
| 80 | 519 | 2,025 | 6,319 | 3·12 | 4,093 |
| 81 | 463 | 1,506 | 4,294 | 2·85 | 3,044 |
| 82 | 358 | 1,043 | 2,788 | 2·71 | 2,108 |
| 83 | 260 | 685 | 1,745 | 2·55 | 1,385 |
| 84 | 170 | 425 | 1,060 | 2·49 | 859 |
| 85 | 107 | 255 | 635 | 2·49 | 515 |
| 86 | 65 | 148 | 380 | 2·57 | 300 |
| 87 | 32 | 83 | 232 | 2.79 | 211 |
| 88 | 15 | 51 | 149 | 2·92 | 103 |
| 89 | 12 | 36 | 98 | 2·72 | 73 |
| 90 | 8 | 24 | 62 | 2·58 | 49 |
| 91 | 6 | 16 | 38 | 2·37 | 32 |
| 92 | 4 | 10 | 22 | 2·20 | 20 |
| 93 | 3 | 6 | 12 | 2·00 | 12 |
| 94 | 1 | 3 | 6 | 2·00 | 7 |
| 95 | 1 | 2 | 3 | 1·50 | 4 |
| 96 | 1 | 1 | 1 | ... | 2 |